In the United States Court of Federal Claims

No. 13-940C
(Filed Under Seal: September 22, 2017)
(Reissued for Publication: November 3, 2017)[*]

SONOMA APARTMENT ASSOCIATES, A California Limited Partnership, Plaintiff, v. THE UNITED STATES, Defendant.	Trial; Section 515 of the Housing Act of 1949; Breach of Contract; Expectancy Damages; Lost Profits Versus Lost Asset Value; Postbreach Evidence; Discount Rates; Tax Neutralization Payment; Third-Party Standing

Daphne A. Beletsis and Deborah S. Bull, Santa Rosa, CA, for plaintiff.

Matthew P. Roche and Jeffrey A. Regner, United States Department of Justice, Washington, DC, for defendant.

OPINION AND ORDER

SWEENEY, Judge

Plaintiff Sonoma Apartment Associates, a California Limited Partnership, obtained a loan from the federal government to construct rural low- and moderate-income housing. Plaintiff was contractually entitled to prepay the balance of the loan after twenty years, but when it sought to exercise this right, the government denied its request. After the government conceded liability for breach of contract, the court held a trial on the issue of damages. As explained in more detail below, the court awards damages to plaintiff in an amount to be determined in accordance with the court's findings and conclusions.

TABLE OF CONTENTS

[*] For the reasons stated during the November 3, 2017 status conference, the court reissues this decision for publication without redactions.

I. FACTS

This section contains the court's findings of fact as required by Rule 52(a)(1) of the Rules of the United States Court of Federal Claims.[1]

[1] The court derives these facts from the parties' Joint Stipulation of Facts ("Jt. Stip."), the transcript of testimony elicited at trial ("Tr."), the exhibits admitted into evidence during trial ("PX," "DX," or "JX"), and the relevant statutes and regulations. Citations to the trial transcript will be to the page number of the transcript and the last name of the testifying witness.

A. Plaintiff's Contract With the Government and the Government's Breach of That Contract

On September 4, 1984, plaintiff executed an agreement with the Farmers Home Administration of the United States Department of Agriculture in which the government agreed, pursuant to section 515 of the Housing Act of 1949, Pub. L. No. 81-171, 63 Stat. 413 (as added by Pub. L. No. 87-723, § 4(b), 76 Stat. 670, 671-72 (1962)), to lend plaintiff $1,261,080 to construct a low- and moderate-income housing project at 59 West Agua Caliente Road in Sonoma, California. Jt. Stip. ¶ 1; JX 1; see also Jt. Stip. ¶ 1 (indicating that the project is known as Sonoma Village Apartments). Plaintiff agreed to repay the loan in installments over a fifty-year period ending October 27, 2035. Jt. Stip. ¶ 4.

In conjunction with the loan agreement, plaintiff executed two promissory notes in favor of the government, one for $1,222,650, and the other for $38,430. Id. ¶ 3. Both promissory notes included the following provision: "Prepayments of scheduled installments, or any portion thereof, may be made at any time at the option of Borrower providing the loan is in a current status." Id. ¶ 5. The promissory notes, in turn, were secured by a deed of trust that was recorded in Sonoma County, California on October 28, 1985. Id. ¶ 6. The deed of trust included a rider containing the following language:

> The borrower and any successors in interest agree to use the housing for the purpose of housing people eligible for occupancy as provided in section 515 of Title V of the Housing Act of 1949 and [Farmers Home Administration] regulations then extant during this 20-year period, beginning the date this instrument is filed of record.

Id. ¶ 7; JX 4 at 6. The aforementioned twenty-year period ended on October 27, 2005. Jt. Stip. ¶ 8. Plaintiff would not have accepted the loan from the government had it not been provided with the ability to prepay the loan after twenty years. Tr. 51 (Gullotta). Indeed, plaintiff always intended to prepay the loan after twenty years. Id. at 54, 100.

By accepting the loan from the Farmers Home Administration, plaintiff agreed to comply with United States Department of Agriculture regulations pertaining to the section 515 program, including regulations requiring the submission of annual financial reports and regulations regarding the management of housing projects. Jt. Stip. ¶¶ 13-14; 7 C.F.R. §§ 3560.102, .308 (2017); 7 C.F.R. §§ 1930.113, .124, & pt. 1930, subpt. C, ex. B (1985). The requirements set forth in these regulations are much more onerous than those for managing market-rate rental properties. Tr. 344-45 (Williams); see also id. at 44-45 (Gullotta) (characterizing the requirements of the section 515 program as "complex[]"). Indeed, in addition to submitting annual financial reports, properties in the section 515 program must submit to annual third-party audits, process lengthy rental applications, and engage in a time-consuming income-verification process. Id. at 344-45 (Williams). Further, the government reviews and approves the properties' budgets, monitors the properties' reserve capital accounts and all capital improvements, and

controls the properties' ability to increase rents.[2] Id. at 346-47, 349; see also id. at 850-51 (Pedrotti) (explaining that the government approves rent increases based on its analysis of a property's operating expenses, and prefers that any increases will not result in net profits exceeding $2000). The government also limits the amount of income that may be distributed to plaintiff from operating Sonoma Village Apartments. See, e.g., 7 C.F.R. § 3560.305 (2017) (allowing borrowers a return on their investment under certain circumstances); JX 1 at 3 (reflecting that funds in plaintiff's reserve account could be used, with the government's approval, "[t]o pay dividends to the partners of up to 8 percent per annum of the borrower's initial investment of $64,350.00," but if the "return on investment for any year exceed[ed] 8 percent," the government could "require that the borrower reduce rents the following year and/or refund the excess return on investment to the tenants or use said excess in a manner that [would] best benefit the tenants"); see also JX 34 at 1 (indicating, in plaintiff's 2013 budget and 2014 proposed budget, that plaintiff would receive only $5310 per year from operating Sonoma Village Apartments); PX 54 at 74 (reflecting, in a budget history spreadsheet for 2008 through 2010, that plaintiff proposed receiving $5310 per year from operating Sonoma Village Apartments).

After plaintiff executed the loan agreement, the promissory notes, and the deed of trust (collectively, "the contract"), Congress, concerned with the loss of low-income housing that was caused, in part, by loan prepayments, enacted two statutes that retroactively limited borrowers' rights to prepay the balance of loans made through the section 515 program: the Emergency Low Income Housing Preservation Act of 1987, Pub. L. No. 100-242, 101 Stat. 1877 (1988), and the Housing and Community Development Act of 1992, Pub. L. No. 102-550, 106 Stat. 3672.

On November 5, 2010, plaintiff submitted a written request to Rural Development–the agency within the United States Department of Agriculture responsible for the rural housing programs formerly administered by the Farmers Home Administration, Jt. Stip. ¶ 2–to prepay the balance of its loan. Id. ¶ 9. Its request reflected that it intended to prepay the balance of the loan–approximately $1.2 million–without refinancing, and that it possessed the financial resources to do so. JX 5 at 2-4; Tr. 56 (Gullotta); see also Tr. 56-57 (Gullotta) (indicating that at the time of trial, plaintiff still had the wherewithal to prepay the balance of the loan without refinancing). However, Rural Development did not accept plaintiff's request to fully prepay the balance of its loan. Jt. Stip. ¶ 10. Rather, on January 3, 2011, Rural Development offered plaintiff certain incentives in lieu of accepting prepayment. Id. Rural Development's refusal to accept full prepayment constitutes a breach of contract. Id. ¶ 11.

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[2] In addition to reviewing and approving the amount of rent that plaintiff can charge its tenants, the government limits the amount of rent that plaintiff can retain. Tr. 353 (Williams). Specifically, of the rent it collects from its tenants, plaintiff is entitled to retain the base rent–"the rent that is approved in the budget for [it] to spend on operations." Id. If it collects more than the base rent, as it does with respect to approximately twelve tenants at Sonoma Village Apartments, the overage is sent to the government. Id. at 353-54.

B. Plaintiff and Its Partners

Plaintiff was formed on August 27, 1984. JX 51 at 1. Originally, it had two partners–Richard Gullotta and Richard Parasol–who each owned a 2.5% general partnership interest and a 47.5% limited partnership interest. Tr. 53, 100 (Gullotta). Mr. Parasol sold his limited partnership interest to a married couple–the Belks–and after her husband's death, Mrs. Belk sold the interest to Richard Gullotta's children,[3] id. at 53-54, 100-01, Mark Gullotta, Eric Gullotta, and Karen Kass (née Gullotta),[4] id. at 46, 100. Thus, at the time of the government's breach of contract in 2011, plaintiff had two general partners and four limited partners, as follows:

Sonoma Apartment Associates	**Partnership Interest**
General Partners	
Richard Gullotta	2.5%
Richard Parasol	2.5%
Limited Partners	
Richard Gullotta	47.5%
Mark Adrien Gullotta Revocable Living Trust	47.5%
Eric S. Gullotta Revocable Living Trust	1/3 of 47.5%
Karen N. Gullotta Revocable Living Trust	1/3 of 47.5%

Id. at 46, 104-05; JX 51. All profits received and losses incurred by the partnership are allocated to its partners in accordance with the partnership agreement, JX 57 at 17, 27, 41-42; Tr. 1194, 1200 (Krabbenschmidt); see also Tr. 1194-95 (Krabbenschmidt) (explaining that under the Internal Revenue Code, the partners can "modify the way the income is allocated between the partners all the way up until April 15th . . . following the year end"), and the partners are responsible for paying taxes on their shares of any profits, Tr. 1193-94 (Krabbenschmidt); see 26 U.S.C. § 701 (2012) ("A partnership as such shall not be subject to the income tax imposed by this chapter. Persons carrying on business as partners shall be liable for income tax only in their

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[3] Although the Belks' limited partnership interest was purchased by Richard Gullotta's children's revocable living trusts, JX 51, the court will, for simplicity, refer to the children as the owners of the limited partnership interest.

[4] For clarity, the court will refer to Richard Gullotta and his children by their first and last names.

separate or individual capacities."). Further, the partnership's available cash flow is distributed to its partners in accordance with the partnership agreement. JX 57 at 18, 41-42.

Richard Gullotta conceived of and developed plaintiff's low- and moderate-income housing project. Tr. 48-50 (Gullotta). He has extensive financial and real estate experience. With respect to his financial experience, Richard Gullotta received an undergraduate degree in accounting in 1965, worked for several years as a revenue agent for the Internal Revenue Service, became a Certified Public Accountant ("CPA") in 1972, and received a master's degree in taxation in 1976. Id. at 41-42. In his CPA practice, he prepares approximately 750 income tax returns per year, including his own return and the returns of his children. Id. at 43, 60; see also id. at 57 (reflecting that Richard Gullotta has been preparing tax returns since 1969), 90 (indicating Richard Gullotta's intention to "continue [his] CPA practice" as long as he could "help people"). With respect to his real estate experience, Richard Gullotta became a licensed real estate broker in 1990, and was accredited as a national mortgage loan originator in 2010. Id. at 41-43. He owns a number of rental properties–mostly single family residences–that he manages with his wife. Id. at 43-45, 97; see also id. at 97 (reflecting that Richard Gullotta and his wife managed nine rental properties in 2014). In addition, he owns, either personally or as a partner, ten low-income rental properties that are managed by a third-party management company. Id. at 43-46.

On their 2015 federal income tax return, Richard Gullotta and his wife reported an adjusted gross income of $415,220. JX 81 at 2; see also DX 18 (indicating that the couple's adjusted gross income fluctuated between 2011 and 2015, with a high of $430,096 in 2011 and a low of $275,222 in 2014). Approximately half of their income was derived from Richard Gullotta's CPA practice. JX 81 at 2, 53. In addition, a small percentage of their income came from unemployment compensation. Id. at 2; see also Tr. 94-96 (Gullotta) (indicating that in 2014, Richard Gullotta received unemployment compensation for the six months following the tax season, during which time he earned no income from his CPA practice or as a property manager). Richard Gullotta and his wife also reported total passive activity losses of $409,345 for 2015,[5] which included $13,994 in unallowed losses attributable to the operation of Sonoma

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[5] A passive activity loss, as the term is used in this decision, is a loss incurred by a property owner who does not materially participate in the property. Tr. 72 (Gullotta); accord 26 U.S.C. § 469(c)(1)-(2); see also Tr. 72 (Gullotta) (defining "material participation" as "put[ting] in 500 hours"). A passive activity loss incurred in one year can be carried forward and used to offset income from passive activities in the following year. Tr. 71, 77 (Gullotta); 26 U.S.C. § 469(b), (d)(1). Indeed, a property owner can continue to carry forward the loss to subsequent years until the entire loss is exhausted. Tr. 75 (Gullotta), 1247 (Krabbenschmidt). Although the loss has no other effect on a property owner's tax liability, id. at 76, 130, 155 (Gullotta), a property owner must report its passive activity losses on his or her federal income tax returns, id. at 76. The amount reported on a particular year's income tax return may not ultimately reflect the amount of passive activity losses incurred in that year. See id. at 125-35 (reviewing Richard Gullotta's reported passive activity losses from 2011 to 2015, and reflecting Richard Gullotta's

Village Apartments. JX 81 at 32, 65-66; see also JX 58 at 22-23 (reporting a $301,977 passive activity loss for 2011, $154,612 of which was carried forward from 2010); JX 59 at 22-23 (reporting a $394,068 passive activity loss for 2012, $301,977 of which was carried forward from 2011); JX 60 at 33-34 (reporting a $584,493 passive activity loss for 2013, $425,318 of which was carried forward from 2012); JX 61 at 28-29 (reporting a $347,108 passive activity loss for 2014, after carrying forward $631,758 from 2013); JX 81 at 32 (reporting a $409,345 passive activity loss for 2015, $347,108 of which was carried forward from 2014); Tr. 137-38 (Gullotta) (reflecting that Richard Gullotta anticipated carrying forward passive activity losses for the indefinite future). At the time of trial (October 2016), Richard Gullotta was nearly seventy-three years old, and would therefore turn ninety-two years old in 2035, "if [he was] alive."[6] Tr. 89 (Gullotta).

Mark Gullotta and his wife reported an adjusted gross income of $282,572 on their 2015 federal income tax return. JX 67 at 1; see also DX 16 (indicating that the couple's adjusted gross income in 2015 far exceeded the adjusted gross income they reported for the previous four years, which ranged from $133,583 to $162,505). They also reported a $13,334 passive activity loss, all of which was carried forward from the previous year and was attributable to the operation of Sonoma Village Apartments. JX 67 at 15-16. Mark Gullotta is a CPA and an attorney, and his wife is a CPA. Id. at 2. They have three children. Id. at 1.

Eric Gullotta and his wife reported an adjusted gross income of $12,585 on their 2014 federal income tax return, most of which was derived from business profits described on two Schedule Cs. JX 55 at 1, 5-8; see also DX 17 (reflecting similarly low adjusted gross incomes

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explanation that one year's passive activity loss might not match the passive activity loss carried forward into the following year if something happened in the meantime that required an adjustment to that loss), 154-55 (explaining that an adjustment to an amount of passive activity loss carried forward from the prior year could be due to a partner filing an income tax return before receiving the K-1 statement from the partnership's tax preparer). But see id. at 1267 (Krabbenschmidt) (indicating that "most people" do not file their income tax returns before receiving their K-1 statements, and that even if a taxpayer did so, his or her income tax return would be required to contain "a good faith estimate" of the amounts that would appear on the K-1 statement). However, the parties dispute whether a property owner must report an adjustment of the amount of passive activity losses incurred in a particular year after the federal income tax return for that year has been filed. Compare id. at 125 (Gullotta) (reflecting Richard Gullotta's averment that there is no requirement to notify the Internal Revenue Service when adjusting a passive activity loss to be carried forward to the following year), with id. at 1264 (Krabbenschmidt) (reflecting Mr. Krabbenschmidt's averment that the Internal Revenue Service "typically . . . likes to see you file an amended tax return to properly report" passive activity losses).

[6] Richard Gullotta mistakenly testified that he would be ninety-three years old in 2035, Tr. 89 (Gullotta), a minor discrepancy.

for 2011 through 2013). They also reported a $17,750 passive activity loss, $5,253 of which was carried forward from the previous year and all of which was attributable to the operation of Sonoma Village Apartments. JX 55 at 21-22. Eric Gullotta is a tax attorney, id. at 5, and "started his own law practice in approximately 2011," Tr. 1205 (Krabbenschmidt). For the first four years of his new law practice, he "had almost an . . . equal amount of operating expenses offsetting [the law practice's] gross income." Id. at 1205-06; accord DX 17. Indeed, in 2014, Eric Gullotta's law practice had gross income of $293,924, expenses of $282,626, and profits of $11,298. JX 55 at 5. He attributed the law practice's high amount of expenses to the cost of starting a new law practice, and did not expect that the costs would be so high in the future. Tr. 1206 (Krabbenschmidt). Eric Gullotta's wife is a realtor, and in 2014 she reported gross receipts of $59,320, expenses of $43,813, and profits of $15,507. JX 55 at 7. The couple has three children. Id. at 1.

Karen Kass and her husband reported an adjusted gross income of $72,841 on their 2015 federal income tax return. JX 72 at 1; see also DX 19 (indicating that the couple's adjusted gross income was $110,244 in 2013 and $45,743 in 2014); JX 68 at 1 (reflecting, on Karen Gullotta's 2011 federal income tax return, a filing status of "single" and an adjusted gross income of $84,922); JX 69 at 1 (reflecting, on Karen Gullotta's 2012 federal income tax return, a filing status of "single" and an adjusted gross income of $92,618). They also reported a $12,497 passive activity loss, all of which was carried forward from the previous year and was attributable to the operation of Sonoma Village Apartments. JX 72 at 18-19. Karen Kass is an attorney and her husband is an accountant.[7] Id. at 2. The couple has one child. Id. at 1.

The trial record lacks any evidence concerning the financial situation of the remaining partner, Mr. Parasol.

Plaintiff's financial statements are audited annually by "[a]n independent CPA firm." Tr. 60-61 (Gullotta). The firm provides its certified audits to the government, and the government has never identified any problems with the certified audits. Id. at 61. The firm also prepares plaintiff's income tax returns, and Richard Gullotta relies on those returns when preparing his and his children's income tax returns. Id.

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[7] Defense counsel represented to a testifying witness that Karen Kass stated during her deposition that she was not currently working, but planned on going back to work. Tr. 813. However, Karen Kass did not testify during trial, nor was her deposition testimony offered into evidence. In addition, defense counsel twice represented to testifying witnesses that Karen Kass's husband stated during his deposition that he would be taking the CPA examination and, if he became a CPA, expected his income to increase. Id. at 808-09, 1213. However, Mr. Kass did not testify during trial, nor was his deposition testimony offered into evidence.

C. Sonoma Village Apartments

The low- and moderate-income housing project that plaintiff constructed with the proceeds of the Farmers Home Administration loan–Sonoma Village Apartments–is a thirty-unit apartment complex consisting of fourteen one-bedroom/one-bathroom units, eight two-bedroom/one-bathroom units, four three-bedroom/one-bathroom units, and four three-bedroom/one-and-one-half-bathroom units.[8] Id. at 1009 (Weinberg); Jt. Stip. ¶¶ 1, 12; PX 54 at 2, 99. Its neighborhood–an area of the Sonoma Valley region situated between the town of Sonoma and a corridor containing wineries and vineyards–is oriented toward lower-income housing. Tr. 169-70 (Burwell). Historically, Sonoma Village Apartments has no vacancies and there is always a waiting list for its units. Id. at 195.

The property manager for Sonoma Village Apartments is AWI Management Corporation ("AWI"), which is owned by Tina Williams and her husband. Id. at 342-43, 345 (Williams). Ms. Williams has managed Sonoma Village Apartments since its inception. Id. at 345. Indeed, Ms. Williams has managed affordable multifamily housing properties since 1983, and at the time of trial, simultaneously managed 135 such properties, including ten properties owned by Richard Gullotta. Id. at 342-43; see also id. at 344 (indicating that Ms. Williams has managed approximately eighty Rural Development properties). Additionally, she managed two rural market-rate rental properties–a fifty-unit complex in Middletown, California, and a twenty-unit complex in Weaverville, California–for a period of approximately five years beginning in 2009. Id. at 373-75. Due to the work involved in complying with the extensive requirements of the section 515 program, AWI's management services are more costly than the management services provided for market-rate rental housing. Id. at 351. At the time of trial, AWI charged plaintiff $52 per unit, id., an amount approved by Rural Development based on a biennial survey conducted by its national office, id.; accord id. at 852 (Pedrotti).

If plaintiff were allowed to prepay the balance of its loan, Richard Gullotta would personally manage Sonoma Village Apartments; he would have an employee on site to handle tenant complaints and would use contractors to handle maintenance issues. Id. at 83-84 (Gullotta). Additionally, plaintiff would make certain capital improvements to reduce its ongoing repair and maintenance costs. Id. at 84-85. Indeed, had Rural Development accepted plaintiff's tender of prepayment in 2011, plaintiff would have incurred expenses of $378,424 to renovate the property, including $25,000 for reroofing, $73,824 for exterior painting and repairs, $54,600 for repaving the parking area, and $225,000 ($7,500 per unit) for interior upgrades. Jt. Stip. ¶ 15. During these renovations, plaintiff would experience a decrease in rental income. Id. ¶ 16.

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[8] Although the parties jointly stipulated that Sonoma Village Apartments included four three-bedroom/two-bathroom units, Jt. Stip. ¶ 12, the evidence in the trial record reflects that these four units each contained only one-and-one-half bathrooms, PX 54 at 99-100; Tr. 1009 (Weinberg).

Finally, under the current tenants' leases, plaintiff would be required to provide at least sixty days advanced notice of a rent increase. Tr. 854 (Pedrotti). If, after the notice period, a tenant failed to pay rent, then plaintiff could initiate eviction proceedings. Id. at 854-55.

D. The April 11, 2011 Appraisal Report

In conjunction with plaintiff's request to prepay the balance of its loan, Rural Development commissioned an appraisal of Sonoma Village Apartments to determine what its market value might be as conventional unsubsidized housing. PX 54 at 25. The appraisal was conducted by two appraisers from the Howard Levy Appraisal Group, Inc., id. at 5, both of whom were licensed in California as certified general appraisers and one of whom held an MAI designation,[9] id. at 7. Their report, issued on April 11, 2011 ("the Levy appraisal"), was reviewed and approved by Rural Development. Id. at 2-3, 5.

The appraisers analyzed Sonoma Village Apartments using two approaches. Id. at 54, 63. One, the sales comparison approach,

> is based upon the assumption that an informed purchaser will pay no more for a property than the cost of acquiring an existing property of the same utility. This approach estimates market value by comparing the sales prices of recent similar transactions with the various attributes of the property under appraisement. Any dissimilarities are resolved by making appropriate adjustments. These differences may pertain to time, age, location, construction, condition, size or external economic factors.

Id. at 62. Under this approach, the appraisers compared Sonoma Village Apartments to eight similar properties in Sonoma County that had then recently sold,[10] id. at 79-92, and concluded that Sonoma Village Apartments would be worth $100,000 per unit, or $3,000,000 total, id. at 91-92, 108.

The second approach used by the appraisers, the income approach,

> converts the anticipated future benefits of property ownership (dollar income) into an estimate of present value. The Income Approach is generally selected as the

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[9] To obtain an MAI designation, an appraiser must have a certain amount of experience (which is peer-reviewed over a four-year period), pass a comprehensive examination, and submit a demonstration appraisal report. Tr. 162 (Burwell). Only approximately 6500 appraisers possess the MAI designation. Id. at 163.

[10] One property was located in Rohnert Park, four properties were located in Santa Rosa, and three properties were located in Sonoma. PX 54 at 79-86. Six of the properties sold in 2010, one property sold in 2009, and the remaining property sold in late 2008. Id.

> preferred technique for income-producing properties because it most closely reflects the investment rationale and strategies of typical buyers. To utilize the Income Approach, the appraiser must project net income, select an appropriate capitalization rate and then capitalize the net income into value, applying the proper discounting procedure.[11]

Id. at 62 (footnote added); accord id. at 93. The specific steps involved in this approach are:

> First, a market rent is determined for the subject property based upon recent rentals in the market area. Then, vacancy and expenses are deducted to arrive at a net operating income which is divided by the capitalization rate to arrive at the market value.

Id. With respect to the market rent element of the analysis, the appraisers determined the reasonable market rents for each unit type at Sonoma Village Apartments:

Unit Type	**Monthly Market Rent**
1 Bed/1 Bath	$850
2 Bed/1 Bath	$1,000
3 Bed/1 Bath	$1,100
3 Bed/1.5 Bath	$1,175

Id. at 99-100. Thus, after adding an amount for miscellaneous income, the appraisers projected that the property would generate annual gross income of $358,800. Id. at 11, 100, 107.

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[11] The capitalization rate is the rate of return for a property based on the property's income, Tr. 206, 209 (Burwell), and is "used by appraisers to estimate the fair market value of a property at any given time," id. at 500 (Ben-Zion). Specifically, the capitalization rate for a particular property is the net income of the property (before debt service) divided by the property's purchase price. Id. at 201 (Burwell); see also PX 42 (indicating the capitalization rates for major apartment complex sales in Sonoma Valley for 2010 through 2015, which ranged from an average of 6.4% in 2011-2012 to an average of 5.47% in 2014-2015); Tr. 949 (Weinberg) (defining "debt service" as the amount needed "to cover the cost of [a] mortgage"). Thus, to estimate a capitalization rate for a property, one analyzes sales of comparable properties. PX 54 at 93; Tr. 500 (Ben-Zion). The capitalization rate is "a reflection of what the market thinks at the time is a fair return to the invested capital and a risk factor." Tr. 494 (Ben-Zion); accord id. at 494-95 (indicating that "whenever one uses a cap[italization] rate into the future, since the future is unknown, it's appropriate to use a cap[italization] rate that contains both the risk and uncertainty about the future and the interest rate").

Accounting for projected vacancies and credit losses (using a standard 5% vacancy factor), id. at 101, 107, the appraisers determined that the property's annual effective gross income would be $340,860, id. at 107. The appraisers then projected the property's operating expenses and reserves using historical data from the property and actual expenses incurred by comparable properties in Sonoma County.[12] Id. at 101-03; see also id. at 101 (indicating that the appraisers "utilized information on expenses" from the Institute for Real Estate Management ("IREM") "[a]s an additional aid in determining reasonable expense projections"), 101-03 (reflecting that the projected operating expenses did not include debt service). They concluded that the property's annual total expenses would be $145,120, which is 43% of effective gross income. Id. at 103, 107; see also id. at 103 ("The subject's total expenses equate to 43% of [effective gross income] while the comparable sales showed a range of 32% to 45% of [effective gross income]. The subject's projected expense ratio is within the range provided by the comparables, albeit toward the high end, and is thus considered reasonable."). Upon subtracting the total expenses from the effective gross income, the appraisers projected that the property would generate annual net income of $195,740. Id. at 11, 107. Finally, the appraisers determined that an appropriate capitalization rate was 6.5%, id. at 103-07, and, upon applying this rate to the property's projected annual net income, concluded that the property's value under the income approach would be $3,010,000, id. at 11, 107.

Ultimately, because investors would give more weight to a value determined under an income approach, and because the value determined under the sales comparison approach supported that value, the appraisers concluded: "The hypothetical market value of the leased fee interest of the subject property, based on the condition that the improvements comprise conventional unsubsidized market rate housing, and assuming stabilized occupancy at market rents, as of April 11, 2011, is therefore estimated to be $3,010,000."[13] Id. at 108.

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[12] Two of the properties were located in Sonoma, one property was located in Petaluma, and the remaining property was located in Santa Rosa. PX 54 at 101.

[13] During trial, Richard Gullotta provided his lay opinion, pursuant to Rule 701 of the Federal Rules of Evidence, that if Sonoma Village Apartments was a market-rate rental property, it would be worth between $200,000 and $250,000 per unit–between $6,000,000 and $7,500,000 in total. Tr. 86-88 (Gullotta). He further testified that, in his opinion, Sonoma Village Apartments, as a subsidized housing complex, was worthless. Id. at 86-87. In contrast, Sandra Pedrotti, Rural Development's area specialist who oversees approximately twenty-five section 515 properties in northern California, id. at 842-43 (Pedrotti), testified that there is an active market for section 515 properties, including Sonoma Village Apartments, and that half of the properties in her portfolio had transferred to new owners, id. at 853, 858-59; see also id. at 861 (reflecting that Ms. Pedrotti had "no idea" what Sonoma Village Apartments was worth). One of defendant's experts agreed with Ms. Pedrotti that there is an active market for section 515 properties, including for Sonoma Village Apartments. Id. at 910-11 (Weinberg). The court is nonetheless aware, as defense counsel acknowledged during closing arguments, that purchasers of these properties make their purchases for the tax write-offs. See Tr. 1529.

II. PROCEDURAL HISTORY

Plaintiff filed suit in the United States Court of Federal Claims ("Court of Federal Claims") on November 27, 2013, alleging that Rural Development improperly refused its request to prepay the balance of its loan. Plaintiff thereafter filed an amended complaint in which it asserted two claims for relief: breach of contract and a violation of the Takings Clause of the Fifth Amendment to the United States Constitution. In its prayer for relief, plaintiff sought monetary damages for defendant's alleged breach of contract, just compensation for defendant's alleged taking, prejudgment interest as permitted by law, and any additional relief the court deemed just and proper.

After the parties concluded fact discovery, plaintiff filed a motion for partial summary judgment as to the government's liability for breach of contract and defendant filed a motion to dismiss plaintiff's Fifth Amendment takings claim. In its December 30, 2015 Opinion and Order, the court granted both motions. Sonoma Apartment Assocs. v. United States, 124 Fed. Cl. 595 (2015). As a result, the sole remaining issue was the amount of damages, if any, due plaintiff for the government's breach of contract.

On May 2, 2016, the parties exchanged expert reports on the issue of damages. The report of one of plaintiff's experts contained a new claim for a "tax neutralization payment"–a payment to neutralize the negative tax consequences of receiving a lump-sum damages award. Shortly after receiving this report, defendant filed a motion for partial summary judgment, contending that plaintiff could not recover such a payment. The court denied defendant's motion in its August 24, 2016 Opinion and Order, concluding that the award of a tax neutralization payment was not barred as a matter of law and that plaintiff was therefore entitled to present evidence on the issue at trial. Sonoma Apartment Assocs. v. United States, 127 Fed. Cl. 721 (2016).

The parties and the court toured Sonoma Village Apartments on October 18, 2016, after which the court conducted a seven-day trial. During its case-in-chief, plaintiff presented the testimony of Richard Gullotta, Ms. Williams, and two expert witnesses–Dana Burwell, a certified general appraiser, and Barry Ben-Zion, Ph.D., an economist.[14] Defendant, during its case-in-chief, presented the testimony of Ms. Pedrotti and two expert witnesses–Brad Weinberg, a

[14] The court qualified Mr. Burwell, without objection, "as an expert in the field of appraisal to testify about the elements of discounted cash flow analysis as well as renovation costs and rent loss during the conversion period." Tr. 165. The court qualified Dr. Ben-Zion, over defendant's objection, id. at 408, 415, as an expert who could perform "a damage calculation based on forensic economic concepts" and who would opine on "[a]ll of plaintiff's economic damages including tax neutralization," id. at 416-17.

certified general appraiser and certified valuation analyst, and Jon Krabbenschmidt, a CPA.[15] Plaintiff presented rebuttal testimony from Dr. Ben-Zion.

After trial, the parties submitted posttrial memoranda and orally presented closing arguments. In its opening posttrial memorandum, plaintiff asserts that the court could compensate it for the government's breach of contract in one of two ways. Plaintiff's preference is for the court to declare that the government's breach excuses plaintiff's future performance under the contract, and to award it monetary damages for the period between the date of breach (January 3, 2011) and the date of trial (estimated to be December 31, 2016).[16] Alternatively, plaintiff requests that the court award it monetary damages consisting of past damages for the period between the date of the government's breach and the date of trial, future damages for the period between the date of trial and the date that the loan agreement will expire (October 27, 2035), and a tax neutralization payment. The court begins by addressing plaintiff's request for nonmonetary relief.

III. NONMONETARY RELIEF

As plaintiff correctly notes, "[i]n general the same contract law is applied when the government is party to a contract as applies to contracts between private parties." Ace

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[15] The court qualified Mr. Weinberg, without objection, "as an expert in the field of appraisal and valuation of multifamily real estate, the calculation of discounted cash flows, and the analysis of plaintiff's damages . . . ." Tr. 869. The court qualified Mr. Krabbenschmidt, without objection, "as an expert in the field of tax calculation as well as the calculation of tax gross-ups in particular." Id. at 1174.

[16] Although plaintiff does not specifically request that the court declare that the government's breach of contract excuses plaintiff's future performance under the contract, it devotes an entire section of its opening posttrial memorandum to arguing that it has the right to cease performance under the contract in light of defendant's breach. Moreover, plaintiff's posttrial memoranda contain multiple suggestions that the court should make the requested declaration. See, e.g., Pl.'s Posttrial Memo. 1 ("What is disputed in this case is whether [plaintiff's] future performance is excused . . . ."), 2 ("[I]f the Court orders that [plaintiff's] obligation to perform under the contract in the future is excused by the Government's breach, only damages up to the date of trial need be awarded by the Court."), 46 ("[Plaintiff] seeks to be permitted to exercise the normal right of a non-breaching party to cease performance under a contract. It seeks past and (if necessary) future damages."), 47 ("If the Court finds that [plaintiff] is required to continue performing under the contract despite the Government's breach, [plaintiff] requests an award of . . . future damages . . . ."); Pl.'s Posttrial Reply 32 ("Unless the Court acknowledges [plaintiff's] right as a non-breaching party to cease performing, Plaintiff will now operate Sonoma Village Apartments as an indentured servant of the Government until 2035, at a tremendous loss."). Accordingly, the court construes plaintiff's arguments and suggestions as a request for the aforementioned declaration.

Constructors, Inc. v. United States, 499 F.3d 1357, 1360 (Fed. Cir. 2007). Thus, just as with any contract between private parties, if the government breaches a contract, the nonbreaching party has the right to cease performance. Stone Forest Indus., Inc. v. United States, 973 F.2d 1548, 1550 (Fed. Cir. 1992); Malone v. United States, 849 F.2d 1441, 1446 (Fed. Cir. 1988). However, in this case, the government refused to accept plaintiff's tender of the balance of the loan, effectively requiring plaintiff to continue performance. Plaintiff therefore requests a declaration from this court that it is entitled cease performance. Unfortunately for plaintiff, its request runs up against this court's jurisdictional limitations.

The Court of Federal Claims possesses jurisdiction to entertain claims for breach of contract against the United States. 28 U.S.C. § 1491(a)(1) (2012); Loveladies Harbor, Inc. v. United States, 27 F.3d 1545, 1554 (Fed. Cir. 1994) (en banc). However, except in a limited number of statutorily defined circumstances not relevant here,[17] the court cannot award nonmonetary equitable relief. See Bowen v. Massachusetts, 487 U.S. 879, 905 & n.40 (1988); Gonzales & Gonzales Bonds & Ins. Agency, Inc. v. Dep't of Homeland Sec., 490 F.3d 940, 943 (Fed. Cir. 2007); Kanemoto v. Reno, 41 F.3d 641, 644-45 (Fed. Cir. 1994). Plaintiff's request for a declaration that it is entitled to cease contract performance is, in essence, a request for specific performance because plaintiff can only cease performance if it pays the balance of the loan, and Rural Development will not accept the payment tendered by plaintiff as contractually required without a court order. Specific performance is an equitable remedy. Texas v. New Mexico, 482 U.S. 124, 131 (1987). As such, it cannot be ordered by this court. See also Glidden Co. v. Zdanok, 370 U.S. 530, 557 (1962) (Harlan, J., plurality opinion) ("From the beginning [the United States Court of Claims, the predecessor to the Court of Federal Claims,] has been given jurisdiction only to award damages, not specific relief."); Larson v. Domestic & Foreign Commerce Corp., 337 U.S. 682, 704 (1949) (holding that "in the absence of a claim of constitutional limitation," specific "relief cannot be had against the sovereign"); District of Columbia v. Barnes, 197 U.S. 146, 152 (1905) (noting that the United States Court of Claims was "unable to grant a decree for specific performance, or exercise the peculiar powers of a court of equity"); United States v. Jones, 131 U.S. 1, 14-19 (1899) (holding that the Tucker Act does not authorize suits "for equitable relief by specific performance"); Massie v. United States, 226 F.3d 1318, 1321-22 (Fed. Cir. 2000) (noting that the Court of Federal Claims lacks the ability to direct specific performance).

Moreover, the decisions relied upon by plaintiff for the proposition that courts have directed specific performance do not control the result in this case. Those decisions concerned

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[17] See 28 U.S.C. § 1491(a)(2) (providing the court with jurisdiction to issue, "as incident of and collateral to" an award of money damages, "orders directing restoration to office or position, placement in appropriate duty or retirement status, and correction of applicable records"); id. (providing the court with jurisdiction to render judgment in nonmonetary disputes arising under the Contract Disputes Act of 1978); id. § 1491(b)(2) (providing the court with jurisdiction to award declaratory and injunctive relief in bid protests); id. § 1507 (providing the court with jurisdiction to issue declaratory judgments under 26 U.S.C. § 7428).

the claims of at least seventeen other owners of rural low- and moderate-income housing projects whose attempts to prepay the balance of their loans were rebuffed by the government. See generally Atwood-Leisman v. United States, 72 Fed. Cl. 142 (2006). Two of the owners–Kimberly Associates and Atwood-Leisman–filed suit in both the Court of Federal Claims and the United States District Court for the District of Idaho.[18] Id. at 146-47, 147 n.10. In their suit in the Court of Federal Claims, the owners sought only monetary damages for the government's breach of contract, both for damages incurred up until they filed suit and for damages they would continue to incur. See 2d Amend. Compl. Prayer for Relief ¶ 1, Atwood-Leisman, 72 Fed. Cl. at 142 (No. 98-815C). By comparison, in their district court suits, the owners sought orders directing the government to accept their prepayments and quieting title to their properties. See Atwood-Leisman, 72 Fed. Cl. at 146, 147 n.10; Kimberly Assocs. v. United States, No. 98-83, slip op. (D. Idaho Dec. 12, 2002), aff'd, 109 F. App'x 138 (9th Cir. 2004) (indicating that the government voluntarily dismissed its appeal and affirming the district court's denial of a motion to intervene); Atwood-Leisman v. United States, No. 98-416, slip op. (D. Idaho Nov. 18, 2002); see also 2d Amend. Compl. ¶ 36, Atwood-Leisman, 72 Fed. Cl. at 142 (No. 98-815C) (reflecting the owners' recognition that although their suits to quiet title were properly brought in the district court, they could only be made whole by filing a breach-of-contract suit for money damages in the Court of Federal Claims). The district court possessed the authority to grant the relief requested by the owners pursuant to 28 U.S.C. § 2410(a), which provides that "the United States may be named a party in any civil action or suit in any district court . . . to quiet title to . . . real or personal property on which the United States has or claims a mortgage or other lien." See also Kimberly Assocs. v. United States, 261 F.3d 864, 868 (9th Cir. 2001) (holding that the claim of Kimberly Associates was cognizable under 28 U.S.C. § 2410); Kimberly Assocs., No. 98-83, slip op. (granting the requested relief); Atwood-Leisman, No. 98-416, slip op. (granting the requested relief). The Court of Federal Claims is not a district court. Ledford v. United States, 297 F.3d 1378, 1382 (Fed. Cir. 2002) (per curiam); accord 28 U.S.C. § 451 (defining "district court" as those courts described in chapter 5 of title 28 of the United States Code); Lightfoot v. Cendant Mortg. Corp., 137 S. Ct. 553, 563 (2017) (distinguishing between "the Court of Federal Claims" and "federal district courts"). Accordingly, it lacks the authority to grant the type of equitable relief that the district court granted to Kimberly Associates and Atwood-Leisman.[19] Accord Dwen v. United States, 62 Fed. Cl. 76, 80 (2004) ("Plainly stated, the court is without jurisdiction to entertain a stand alone claim to quiet title.").

Finally, plaintiff's statement that "nothing prevents the court from acknowledging that, under settled law, [plaintiff] has the right not to continue to perform in the face of the Government's breach," Pl.'s Posttrial Reply 21, is not well taken. An "acknowledgment" that

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[18] Kimberly Associates and Atwood-Leisman were plaintiffs in the same Court of Federal Claims suit, but were plaintiffs in separate district court suits.

[19] If plaintiff desired the type of relief obtained by Kimberly Associates and Atwood-Leisman, it could have filed a quiet title action in district court and a companion suit in the Court of Federal Claims for money damages.

plaintiff has the right to cease performance is tantamount to a declaratory judgment, which, as explained above, the court is without authority to issue. Moreover, such an "acknowledgment" is unnecessary for the court to grant plaintiff the other relief that it seeks–an award of money damages.

In sum, the court declines plaintiff's invitation to award it the nonmonetary equitable relief it describes in its posttrial memoranda.[20]

IV. EXPECTANCY DAMAGES

Shifting to plaintiff's request for monetary relief, the court first reviews plaintiff's request for $6,072,317 in expectancy damages, namely, the profits it has and will lose as a result of the government's breach of contract: $897,209 for the period between the date of the breach and the date of trial, and $5,175,108 for the period between the date of trial and the date that the loan agreement will expire. Defendant contends that plaintiff has not met its burden of proving the claimed expectancy damages, and that the evidence in the trial record instead reflects that plaintiff is entitled to expectancy damages of $1,090,000.

A. Legal Standards

1. Expectancy Damages

"The general rule in common law breach of contract cases is to award damages that will place the injured party in as good a position as he or she would have been [in] had the breaching party fully performed." Estate of Berg v. United States, 687 F.2d 377, 379 (Ct. Cl. 1982). "One way the law makes the non-breaching party whole is to give him the benefits he expected to receive had the breach not occurred." Glendale Fed. Bank, FSB v. United States, 239 F.3d 1374, 1380 (Fed. Cir. 2001). These expected benefits–expectancy damages–"are recoverable provided they are actually foreseen or reasonably foreseeable, are caused by the breach of the promisor, and are proved with reasonable certainty." Bluebonnet Sav. Bank, F.S.B. v. United States, 266 F.3d 1348, 1355 (Fed. Cir. 2001); accord Fifth Third Bank v. United States, 518 F.3d 1368, 1374-75 (Fed. Cir. 2008).

In this case, expectancy damages can be measured in two ways: by "the market value of a lost income-producing asset ('lost asset' or 'lost asset value' damages)," or by the "future lost profits that could have been derived from the lost income-producing asset ('lost profits' damages)." Anchor Sav. Bank, FSB v. United States, 597 F.3d 1356, 1369 (Fed. Cir. 2010); accord First Fed. Lincoln Bank v. United States, 518 F.3d 1308, 1317 & n.4 (Fed. Cir. 2008)

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[20] Plaintiff's request for nonmonetary equitable relief is also problematic because, as defendant notes, plaintiff did not set forth such relief in its amended complaint, and the court had previously advised plaintiff–during a telephonic status conference and in a subsequent order–that it lacked jurisdiction to grant such relief. See Order, Sept. 29, 2014.

(distinguishing between the lost value of an asset and the lost earnings from that asset); Spectrum Scis. & Software, Inc. v. United States, 98 Fed. Cl. 8, 14 (2011) ("Although both forms of damages–lost profits and the value of a lost asset–are often pursued alternatively in the same case, they are different, particularly in terms of their respective proof demands."). With respect to the former approach, "[t]he market value of income-generating property reflects the market's estimate of the present value of the chance to earn future income, discounted by the market's view of the lower future value of the income and the uncertainty of the occurrence and amount of any future property." First Fed. Lincoln Bank, 518 F.3d at 1317. With respect to the latter approach, lost profits are "a recognized measure of damages, where their loss is the proximate result of the breach and the fact that there would have been a profit is definitely established, and there is some basis on which a reasonable estimate of the amount of the profit can be made." Neely v. United States, 285 F.2d 438, 443 (Ct. Cl. 1961). "'When the defendant's conduct results in the loss of an income-producing asset with an ascertainable market value, the most accurate and immediate measure of damages is the market value of the asset at the time of breach–not the lost profits that the asset could have produced in the future.'" First Fed. Lincoln Bank, 518 F.3d at 1317 (quoting Schonfeld v. Hilliard, 218 F.3d 164, 176 (2d Cir. 2000)). However, there is no requirement that expectancy damages be measured using the lost asset approach instead of the lost profits approach. Anchor Sav. Bank, FSB, 597 F.3d at 1369.

"If a reasonable probability of damage can be clearly established, uncertainty as to the amount will not preclude recovery." Locke v. United States, 283 F.2d 521, 524 (Ct. Cl. 1960); see also Energy Capital Corp. v. United States, 302 F.3d 1314, 1325 (Fed. Cir. 2002) ("To recover lost profits for breach of contract, the plaintiff must establish by a preponderance of the evidence that . . . a sufficient basis exists for estimating the amount of lost profits with reasonable certainty." (citation omitted)). Indeed, "[t]he ascertainment of damages is not an exact science, and where responsibility for damage is clear, it is not essential that the amount thereof be ascertainable with absolute exactness or mathematical precision." Bluebonnet Sav. Bank, F.S.B, 266 F.3d at 1355; accord Specialty Assembling & Packing Co. v. United States, 355 F.2d 554, 572 (Ct. Cl. 1966) (per curiam). Thus, a court may award damages if "a reasonable basis of computation is afforded" and "the evidence adduced enables the court to make a fair and reasonable approximation of the damages." Locke, 283 F.2d at 524; accord Specialty Assembling & Packing Co., 355 F.2d at 572; cf. Fifth Third Bank, 518 F.3d at 1378-79 ("We [have] interpreted the 'reasonable certainty' standard to apply only to the fact of damages, after which the court may 'make a fair and reasonable approximation of the damages.'" (quoting Bluebonnet Sav. Bank, F.S.B, 266 F.3d at 1357)). Further, in determining the amount of damages, a court "may act upon probable and inferential as well as direct and positive proof." Locke, 283 F.2d at 524; see also Fifth Third Bank, 518 F.3d at 1375 (noting that in breach-of-contract cases, "proof of damages to a reasonable certainty" is an issue of fact); Cal. Fed. Bank, FSB v. United States, 245 F.3d 1342, 1350 (Fed. Cir. 2001) ("Both the existence of lost profits and their quantum are factual matters . . . .").

2. Date for Calculating Damages

Damages for breach of contract are typically measured as of the date when performance was due, which is often "the date of breach." Energy Capital Corp., 302 F.3d at 1330. For example, when the nonbreaching party is claiming "damages for lost income-producing property," such damages are

> properly determined as of the time the property is lost (usually the time of the breach) because the market value of the lost property reflects the then-prevailing market expectation as to the future income potential of the property, and it is precisely this opportunity that the nonbreaching party has lost.

First Fed. Lincoln Bank, 518 F.3d at 1317. This "rule does not apply, however, to anticipated profits or to other expectancy damages that, absent the breach, would have accrued on an ongoing basis over the course of the contract. In those circumstances, damages are measured throughout the course of the contract." Energy Capital Corp., 302 F.3d at 1330. Consequently, "[a] court may consider post-breach evidence when determining damages in order to place the non-breaching party in as good a position as he would have been [in] had the contract been performed." Fifth Third Bank, 518 F.3d at 1377; accord Anchor Sav. Bank, FSB, 597 F.3d at 1369-70; see also Fifth Third Bank, 518 F.3d at 1377 (holding that "it was appropriate, and certainly not clear error, for the [Court of Federal Claims] to consider the improved markets for conversion and branch sales" that occurred after the government's breach of contract "to compensate [the plaintiff] for the damage sustained" from being forced to convert "to stock ownership" and sell one of its divisions); Fishman v. Estate of Wirtz, 807 F.2d 520, 551-52 (7th Cir. 1986) (affirming the district court's valuation of a going concern, which was based on the concern's gains in the ten-year period following the date of injury, and noting that it "[knew] of no case that suggests that a value based on expectation of gain is more relevant and reliable than one derived from actual gain"); Neely, 285 F.2d at 443 (concluding, in a case in which the government breached a contract that allowed plaintiff to mine coal on certain land, that the profits subsequently realized by another entity from strip-mining that land "would furnish some basis for a fairly reliable estimate of what plaintiff's profits would have been"); Restatement (Second) of Contracts § 352 cmt. b, illus. 6 (Am. Law Inst. 1981) (noting, in a situation where the breaching party failed to construct facilities for a new business within the time provided for in the contract, that the nonbreaching party could attempt to prove its lost profits with records of the new business's "subsequent operation and the operations of similar" businesses); cf. Sinclair Ref. Co. v. Jenkins Petroleum Process Co., 289 U.S. 689, 698 (1933) (remarking that when a court is "measuring the damages for a breach of contract" and "years have gone by before the evidence is offered" at trial, "[e]xperience is then available to correct uncertain prophecy"–"not to charge the offender with elements of value nonexistent at the time of his offense," but "to bring out and expose of light the elements of value that were there from the beginning").

3. Discounting to Present Value

When "computing the damages recoverable for the deprivation of future benefits, . . . adequate allowance [must be] made, according to circumstances, for the earning power of money[.]" Chesapeake & Ohio Ry. Co. v. Kelly, 241 U.S. 485, 491 (1916); accord Jones & Laughlin Steel Corp. v. Pfeifer, 462 U.S. 523, 536 (1983) (remarking that when an "award of damages to replace [a] lost stream of income . . . is paid in a lump sum at the conclusion of the litigation, and when it–or even a part of it–is invested, it will earn additional money"). Thus, "where it is reasonable to suppose that interest may safely be earned upon the amount that is awarded, the ascertained future benefits ought to be discounted in the making up of the award." Chesapeake & Ohio Ry. Co., 241 U.S. at 490.

A key factor in discounting a damages award is choosing the appropriate discount rate, which "is a question of fact." Energy Capital Corp., 302 F.3d at 1332. "[T]he discount rate performs two functions: (i) it accounts for the time value of money; and (ii) it adjusts the value of the cash flow stream to account for risk." Id.; accord id. at 1331 (noting that "anticipated net cash flows . . . are . . . discounted to present value to account for both: (i) the time value of money; and (ii) business and financial risks"). "In a given case, it is for the fact-finder to determine the method of adjusting for risk which most closely represents the value of damages." Id. at 1334.

As a general rule, "[t]o prevent the unjust enrichment of the plaintiff, damages that would have arisen after the date of judgment . . . must be discounted to the date of judgment." Id. at 1330. Further, "the risk portion of the discount rate applied to post-judgment lost profits must also be applied to the lost profits claimed between the time of the breach and judgment." Franconia Assocs. v. United States, 61 Fed. Cl. 718, 766 (2004); accord id. ("[W]hile the court need not reduce to present value the post-breach, pre-judgment lost profits, it must . . . still reduce those anticipated profits to account for risk, at least in a case such as this, where a hypothetical transaction is involved.").

B. The Parties' Experts

The parties presented the testimony of three experts on the issue of expectancy damages. Plaintiff's first expert witness was Mr. Burwell. Mr. Burwell is licensed in California as a certified general appraiser, and works primarily in Marin, Napa, and Sonoma Counties for a wide range of clients. PX 40; Tr. 160, 163, 171 (Burwell). He is a member of the Appraisal Institute and holds an MAI designation. PX 40; Tr. 163 (Burwell). During his career as an appraiser, which began in 1988, Mr. Burwell has appraised market-rate multifamily dwellings in Sonoma County between thirty and fifty times. Tr. 163, 171-72 (Burwell). In addition, he has been qualified to testify as an expert appraiser between ten and fifteen times. Id. at 163-64. Mr. Burwell was asked to perform the following five tasks: (1) determine the market rents for Sonoma Village Apartments for 2011, 2012, 2013, 2014, and 2015; (2) estimate the "market rent over the term of the contract"; (3) determine a discount rate; (4) ascertain the cost of renovating

the apartments when converted to market-rate apartments; and (5) estimate amounts for repair and maintenance. Id. at 165-66.

Plaintiff's second expert witness was Dr. Ben-Zion. Dr. Ben-Zion is an economist who holds a bachelor's degree, a master's degree, and a doctorate in economics, and is currently a professor emeritus at Sonoma State University. Id. at 390-91 (Ben-Zion); PX 1. During his thirty-one-year tenure at Sonoma State University, Dr. Ben-Zion taught economics at the undergraduate and graduate levels, including a graduate-level course–managerial economics–in which he taught his students how to understand financial statements and tax returns. PX 1; Tr. 391-93, 395 (Ben-Zion). He also conducted research in three areas: regional economic projections, finding reliable statistics concerning the economy, and forensic economics. PX 1; Tr. 396-97 (Ben-Zion). With respect to the latter area of research, Dr. Ben-Zion has been working as a forensic economist since 1972, Tr. 397 (Ben-Zion), and is a member of three professional organizations for forensic economists, id. at 401-02; PX 1. Further, as a forensic economist, Dr. Ben-Zion has prepared economic analyses for legal cases "[m]any, many hundreds of times," including cases in which an individual has lost the ability to earn income, cases involving commercial damages, and family law cases in which he has been asked to value assets, such as a family business.[21] Tr. 402-03 (Ben-Zion); accord id. at 408 (reflecting that Dr. Ben-Zion has prepared between 150 and 200 business valuations, either in breach-of-contract cases or family law cases); PX 1. Dr. Ben-Zion "was asked to estimate the economic damages" to plaintiff resulting from its inability to convert Sonoma Village Apartments to a market-rate rental property due to the government's breach of contract. Tr. 417-18 (Ben-Zion).

Defendant's sole expert witness on the issue of expectancy damages was Mr. Weinberg. Like Mr. Burwell, Mr. Weinberg is licensed in California as a certified general appraiser, is a member of the Appraisal Institute, holds an MAI designation, and has been previously qualified as an expert. Id. at 863, 865 (Weinberg); DX 1. Mr. Weinberg is also a certified valuation analyst. DX 1; Tr. 865 (Weinberg). Currently, he is a partner in the evaluation group at Novogradac & Company LLP ("Novogradac"), an accounting and consulting firm that

[21] Dr. Ben-Zion testified that during the course of providing economic analyses in family law cases, he has reviewed at least 300 appraisal reports concerning family homes, family-owned rental properties, and family-owned commercial properties. Tr. 512-13 (Ben-Zion); accord id. at 758. He further testified that he has "some knowledge of the real estate market in Sonoma County . . . because [he is] an economist who has lived in the county . . . since 1969 continuously," has been "hired by the county to make economic projections that included housing demand [and] housing construction," and has been "asked by the county to analyze the impact of Proposition 13," which "limit[ed] the property taxes to a certain percentage of assessed value" and prevented taxes from increasing "more than 2% per year." Id. at 513-14. Finally, he testified that he has "constructed two commercial shopping centers and a rather large office building and managed them for quite a few years and sold them," and still has "some rental property, including one [property] in Sonoma Valley." Id. at 515. However, Dr. Ben-Zion was not offered, or qualified, as an expert in real estate.

specializes in affordable housing. Tr. 862-63 (Weinberg). The evaluation group conducts market studies and appraisals throughout the country, primarily for multifamily developments. Id. at 863. Mr. Weinberg has worked for Novogradac for more than twenty years, but he only recently moved to California to work in its San Francisco office. Id. at 864; accord id. at 992 (indicating that Mr. Weinberg moved to California in June 2016). Approximately 80% of his work concerns affordable housing, while another 15% of his work concerns market-rate housing. Id. at 866; see also id. at 909 (noting that he has appraised section 515 properties throughout the nation for twenty years, for developers and lenders, in both sales and refinancing contexts). He has conducted approximately twenty appraisals in Sonoma County,[22] id. at 992, and "close to fifty [United States Department of Agriculture] deals in California over the last seven, eight years," id. at 1135. In conducting appraisals, Mr. Weinberg is obligated to abide by the Uniform Standards of Professional Appraisal Practice. Id. at 922-23. Mr. Weinberg "was asked to determine the quantum of damages related to" plaintiff's inability to convert Sonoma Village Apartments to a market-rate rental property due to the government's breach of contract. Id. at 869.

C. The Parties' Methodologies and Calculations

The parties take different approaches in calculating plaintiff's expectancy damages. Plaintiff measures its damages by the profits it has lost, and will continue to lose, as a result of Rural Development's refusal to allow plaintiff to prepay the balance of its loan and exit the section 515 program. Defendant, in contrast, measures plaintiff's damages by the value of the property that plaintiff lost as a result of the government's breach of contract. Notwithstanding these distinct approaches, the parties' calculations share similar elements. First, both parties calculate what plaintiff's total net income would be for the duration of the contract under the status quo, in other words, in light of the government's breach of contract ("the restricted scenario"). Second, both parties calculate what plaintiff's total net income would have been for the same time period had the government not breached the contract ("the unrestricted scenario"). Third, both parties compare the restricted scenario to the unrestricted scenario to determine plaintiff's loss. Finally, both parties apply a discount rate to ascertain the present value of plaintiff's loss. The court describes how each party incorporates these elements into their approaches, beginning with plaintiff.

1. Plaintiff's Approach

As previously noted, plaintiff uses the lost profits approach to measure its damages and separates its lost profits into two distinct time periods: (1) the period between the date of the government's breach of contract and the date of trial, for which plaintiff seeks the profits it actually lost, and (2) the period between the date of trial and the date that the loan agreement will

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[22] Mr. Weinberg did not specify the types of properties that he appraised in Sonoma County, in what parts of Sonoma County the properties were located, or when he conducted the appraisals.

expire, for which plaintiff seeks its projected lost profits. Accord id. at 418-19, 736 (Ben-Zion). Dr. Ben-Zion calculated plaintiff's lost profits for each time period using data provided by plaintiff, Mr. Burwell, and Ms. Williams, as well as information that he downloaded from the IREM's website. Id. passim.

a. Past Lost Profits

i. Restricted Scenario

With respect to the first time period plaintiff specifies, the date of the government's breach of contract through the date of trial, Dr. Ben-Zion used data from plaintiff's financial statements–both the actual income received and the actual expenses incurred–to determine plaintiff's net income in the restricted scenario. Id. at 423, 442-44, 746, 751-52; see also id. at 747 (explaining that the amounts for 2016 are annualized from the actual income received and expenses incurred during the first quarter of 2016). He concluded that in the restricted scenario, plaintiff realized total net income of $146,330 for the 2011 to 2016 time period. See id. at 471-72; PX 52 at 1; PX 53 at 1; see also Tr. 443-44 (Ben-Zion) (specifying plaintiff's net income for 2011, 2012, 2013, and 2014), 444-45 (characterizing Sonoma Village Apartments as essentially unprofitable).

ii. Unrestricted Scenario

To calculate net income for the 2011 to 2016 time period in the unrestricted scenario, Dr. Ben-Zion estimated both the income that plaintiff would have received by charging market rents and the expenses that plaintiff would have incurred in operating Sonoma Village Apartments as a market-rate rental property.

Dr. Ben-Zion based his rental income estimates on data provided by Mr. Burwell. PX 52 at 1; PX 53 at 1; Tr. 516, 678, 684, 708, 729 (Ben-Zion). Mr. Burwell, in turn, used data compiled by Scott Gerber as the basis for calculating the rental income that plaintiff would have received in the unrestricted scenario. Tr. 166 (Burwell). Mr. Gerber is a commercial real estate broker who handles multifamily properties in the North Bay market, which includes Sonoma County. Id. at 166, 168-69, 256. He prepares biannual surveys of rents at multifamily properties in the North Bay, id. at 174-75; his surveys are "well known" and are "considered the standard for understanding multifamily trends in the North Bay," id. at 174; accord id. at 175 (indicating that "a lot of professionals" rely on Mr. Gerber's surveys), 259 ("Appraisers rely on commercial real estate brokers to develop market transactions, rent transactions, [and] sales transactions."), 322 ("Appraisers rely very strongly on commercial real estate brokers for leads, information on sales, rent comp[arable]s, [and] investment surveys. . . . [T]hey are involved in the transactions and they tell us a tremendous amount . . . ."); PX 54 at 43 (reflecting that data from Mr. Gerber's rent survey for Sonoma Valley were used in the Levy appraisal). The survey that Mr. Gerber prepares for the Sonoma Valley market is based on data from seven properties (300 units total), and specifies the average monthly rent for one-, two-, and three-bedroom units; the average

square footage of each unit type; the average rent per square foot; and the vacancy rate. Tr. 167-68 (Burwell), 176-77; accord PX 41.

After obtaining the data from Mr. Gerber's rent surveys, Mr. Burwell visited the seven apartment complexes that Mr. Gerber surveyed. Tr. 183 (Burwell). But see id. at 254-55 (reflecting that Mr. Burwell did not visit the apartment complexes or speak with anyone at the apartment complexes until after he provided his data to Dr. Ben-Zion). He inspected the properties and spoke with "a couple of on-site managers" and some tenants. Id. Although all of the properties are older and cater to lower-income households, they differ in the number and types of amenities provided to tenants. Id. at 185; see also id. at 183-84 (indicating that Mr. Burwell considered some of the properties to be superior to Sonoma Village Apartments, some of the properties to be inferior to Sonoma Village Apartments, and the remainder to be roughly the same as Sonoma Village Apartments); cf. id. at 196-97 (indicating that the utilities paid for by the landlords at the seven properties and Sonoma Village Apartments were "pretty much the same"). Mr. Burwell explained that in a sophisticated market, the number and quality of amenities are priced into rents, but in an unsophisticated market like Sonoma Valley, rents are not affected by amenities. Id. at 187-88. Accordingly, Mr. Burwell did not adjust the average rents or average rents per square foot supplied in Mr. Gerber's rent surveys to account for any differences in amenities between the seven surveyed properties and Sonoma Village Apartments. Id.

Thus, for each of the unit types at Sonoma Village Apartments, Mr. Burwell used Mr. Gerber's average rent per square foot to calculate the rents that plaintiff could obtain on the open market for 2011 through 2015.[23] Id. at 190-91, 266, 324. Mr. Burwell then reduced those gross rents to account for possible vacancies using the vacancy rates supplied by Mr. Gerber. Id. at 192. Those adjustments gave Mr. Burwell plaintiff's effective gross income for each year. Id. Mr. Burwell's conclusions are summarized in the following table:

	2011	**2012**	**2013**	**2014**	**2015**
Monthly Market Rents					
1 Bed/1 Bath	$946.50	$1003.29	$1003.29	$1066.39	$1173.66
2 Bed/1 Bath	$1158.00	$1158.00	$1158.00	$1266.08	$1374.16
3 Bed/1 Bath	$1407.60	$1407.60	$1407.60	$1519.80	$1642.20
3 Bed/1.5 Bath	$1428.00	$1509.60	$1509.60	$1652.40	$1652.40

[23] Plaintiff's experts did not possess data from Mr. Gerber's 2016 rent surveys. Tr. 235 (Burwell), 433 (Ben-Zion).

Monthly Gross Income[24]	$406,289	$419,746	$419,746	$452,963	$487,235
Vacancy Rate	3.5%	4.1%	1.5%	0.9%	2.4%
Effective Gross Income	$392,069	$402,537	$413,450	$448,886	$475,517

PX 43.

Dr. Ben-Zion used the estimated rents supplied by Mr. Burwell to determine gross rental income. See PX 52 at 2; PX 53 at 2; Tr. 423, 440, 678-79, 684 (Ben-Zion). However, rather than using the actual vacancy rates experienced in Sonoma Valley to arrive at an effective gross income, Dr. Ben-Zion used a uniform 3% vacancy rate for each year.[25] PX 52 at 2; PX 53 at 2. He then further adjusted the estimated gross rental income by adding an estimated amount of "other income" (2.3% of the gross rental income)–essentially laundry and vending income, Tr. 749 (Ben-Zion)–to project the annual net rental income amounts. PX 52 at 2; PX 53 at 2. Finally, Dr. Ben-Zion divided the net rental income he estimated for 2011 in half to reflect the receipt of only six months of market-rate rental income beginning on July 1, 2011.[26] See PX 52 at 2; PX 53 at 2; Tr. 441 (Ben-Zion).

Next, Dr. Ben-Zion made an adjustment to account for plaintiff's costs of making certain capital improvements to the property and the rental income that plaintiff would lose during such renovations. PX 52 at 2; PX 53 at 2. He did so by reducing the estimated net rental income for 2011 by the renovation costs–stipulated by the parties to be $378,424, Jt. Stip. ¶ 15–and six

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[24] Monthly gross income and effective gross income amounts are rounded to the nearest dollar.

[25] Dr. Ben-Zion did not testify regarding the origin of the 3% vacancy rate that he used to calculate past damages in the unrestricted scenario. However, the trial record as a whole indicates that he used the 3% "long term market vacancy" rate supplied by Mr. Burwell. See PX 39 (containing some of the information that Mr. Burwell provided to Dr. Ben-Zion); Tr. 194-96 (Burwell) (indicating the basis for the 3% vacancy rate). In fact, it bears noting that 3% is greater than the average of the actual vacancy rates noted by Mr. Burwell (2.5%).

[26] Presumably, Dr. Ben-Zion posited that plaintiff would receive income from restricted rents from January 1, 2011, to June 30, 2011. Indeed, as explained below, Dr. Ben-Zion subtracted six months of restricted rental income from 2011's estimated net rental income to account for the fact that there would be no tenants at Sonoma Village Apartments for the first six months of the year. However, the trial record lacks any evidence that Dr. Ben-Zion credited plaintiff with six months of restricted rental income before he deducted the amount to reflect the vacancies. See also infra note 27.

months of lost rental income, which he determined was $144,598.[27] PX 52 at 2; PX 53 at 2; accord Tr. 1366-67 (Ben-Zion); see also id. at 216-18 (Burwell) (reflecting Mr. Burwell's conclusions, which he believed were confirmed in part by two apartment complex renovations that he observed while he was working on this case, that it would take five to six months to complete the interior renovations, that units would need to be vacant to complete these renovations, and that no rent would be collected during the renovations), 968 (Weinberg) (indicating that the $144,598 amount came from Mr. Burwell's expert report); PX 39 (containing Mr. Burwell's conclusion that "[r]ent loss during renovation is 5-6 month[s'] rent loss at contract rent").

Dr. Ben-Zion then used two methods to estimate the expenses that plaintiff would have incurred in the unrestricted scenario. Tr. 446 (Ben-Zion). Under the first method, which he believed was the more reasonable method, id. at 817, 823-24, Dr. Ben-Zion relied on data supplied by Ms. Williams, id. at 446, 450; PX 53. At Richard Gullotta's request, Ms. Williams estimated the expenses that plaintiff would have incurred operating Sonoma Village Apartments as a market-rate rental property from 2011 through 2016. Tr. 376-77 (Williams). Ms. Williams based her estimates on the actual expenses incurred by plaintiff (some of which would be the same under both the restricted and unrestricted scenarios), information provided by Richard Gullotta regarding how the property would be managed in the unrestricted scenario, and her experience in managing multifamily rental properties. Id. at 356-57, 358, 361. The following table summarizes the bases for Ms. Williams's estimates:

[27] As plaintiff's counsel confirmed during closing arguments, Tr. 1486-89, it appears that Dr. Ben-Zion made two adjustments for lost rental income for 2011, effectively double counting six months of lost income. Initially, when estimating the net rental income that plaintiff would have received in 2011, Dr. Ben-Zion started with a baseline of six months of net rental income at market rents ($201,692), rather than a full year of net rental income. See id. at 1365-66 (Ben-Zion); PX 52 at 2; PX 53 at 2. He then subtracted "[l]ost rent (6 mos.)" ($144,598) from that amount, which appears to reflect the unrestricted rental income that would be lost due to the renovations. See PX 52 at 2; PX 53 at 2; Tr. 218 (Burwell) (reflecting Mr. Burwell's estimate that it would take "five to six months" to accomplish the renovations and that plaintiff would lose 100% of the rent for that time period), 441-42, 1364, 1367 (Ben-Zion).

Expense Item	Basis or Bases for Ms. Williams's Estimate
Operating Expenses	
Maintenance and Repairs Payroll	(1) Richard Gullotta's representation that he would not have any on-site employees, (2) her knowledge of the state requirement that a responsible person be available to advise the owner of any issues, and (3) her personal experience regarding the amount of a typical monthly stipend for the responsible person
Maintenance and Repairs Supply	Actual expenses, reduced to accommodate Richard Gullotta's representation that he would contract out more maintenance and repair work
Maintenance and Repairs Contract	(1) Actual expenses, increased to accommodate (a) Richard Gullotta's representation that he would contract out more maintenance and repair work and (b) actual experience in turning over an average of eight apartments per year; and (2) her "best guess"
Painting	Actual experience in turning over an average of eight apartments per year
Grounds	Her knowledge of the cost to hire a third party to "mow and blow" once per month and trim hedges once per year
Services (mainly pest control)	Actual expenses
Annual Capital Budget	Average of annual actual expenses
Other Operating Expenses	Average of annual actual expenses
Utilities	
Electricity; Water; Sewer; Fuel (Oil/Coal/Gas); Trash Removal	Actual expenses
Administrative Expenses	
Site Manager Payroll; Management Fee	Richard Gullotta's representation that he would personally manage the property and not have any on-site employees

Legal	Average of annual actual expenses
Advertising	Average of annual actual expenses
Telephone	Actual expenses
Office Supplies	Actual expenses, reduced by half to account for the elimination of paperwork required by Rural Development
Office Furniture and Equipment	Average of annual actual expenses
Training	Actual expenses for a required fair housing course
Other Administrative Expenses	Average of annual actual expenses
Taxes and Insurance	
Real Estate Taxes	Actual expenses, but she believes that they would change in the unrestricted scenario
Other Taxes, Licenses, and Permits	Actual expenses, but she believes that they would change in the unrestricted scenario
Property and Liability Insurance	Actual expenses, but she believes that they would change in the unrestricted scenario
Fidelity Coverage Insurance	Actual expenses, but she believes that they would change in the unrestricted scenario

Id. at 357-72, 380-81, 384-86; PX 10. Ultimately, Ms. Williams estimated amounts for each expense item save two: Site Manager Payroll and Management Fee. PX 10. For those two items, she estimated $0 in expenditures due to Richard Gullotta's representation that he would personally manage Sonoma Village Apartments. Tr. 380 (Williams); accord id. at 83-84 (Gullotta), 710 (Ben-Zion); cf. id. at 379-80 (Williams) (agreeing that it was a good idea to have an on-site manager and an on-site maintenance person). In addition, Ms. Williams indicated that plaintiff would incur expenses for bookkeeping and accounting services, but she could not say how much those services would cost. Id. at 365-66 (Williams). Dr. Ben-Zion used the amounts estimated by Ms. Williams in his calculations. Compare PX 10 (Ms. Williams's estimated expenses), with PX 53 at 2 (Dr. Ben-Zion's estimated expenses). He commented, however, that although he did not include any amounts for a management fee, there is a cost associated with this item that should be accounted for in the calculation of plaintiff's lost profits. Tr. 450, 680-83, 706 (Ben-Zion); see also id. at 679-83 (indicating that Dr. Ben-Zion proposed a $1000 management fee based on his experience managing properties and a monthly amount he was

recently charged for the management of a small property, but also describing the amount as "random[]" and acknowledging that he did not know what management companies charge today). Finally, it bears noting that for 2011, Dr. Ben-Zion divided each expense item in half to reflect his assumption that expenses would be incurred for only six months that year. Compare PX 10 (Ms. Williams's estimated expenses), with PX 53 at 2 (Dr. Ben-Zion's estimated expenses). However, he did not make any adjustments based on the likelihood that plaintiff would incur the full amount of at least some of the expenses–for example, training and real estate taxes–despite only receiving six months of rental income. Accord Tr. 1156 (Weinberg).

Under the second method of estimating expenses, which he provided as a way to check the results of the first method, id. at 817, 823 (Ben-Zion), Dr. Ben-Zion relied on information that he downloaded from the IREM website, id. at 461-62, 716-17; PX 52; cf. Tr. 717 (Ben-Zion) (indicating that the information downloaded by Dr. Ben-Zion was offered by the IREM for free as a sample of the information available in the products that they offered for purchase). "IREM surveys apartment community owners throughout the country and compiles detailed operating expense information on a per square foot [basis] or as a percent of [projected gross income]." PX 54 at 101; accord Tr. 423 (Ben-Zion) (explaining that the IREM "provides guidelines of what percentage expenses you would expect in apartment buildings"). Dr. Ben-Zion downloaded information for "Anytown, USA," Tr. 467, 719 (Ben-Zion), which Dr. Ben-Zion assumed represented the national average, id. at 467, 721; see also id. at 725 (acknowledging that the downloaded information likely did not include data from Sonoma County). Dr. Ben-Zion did not know what years the information represented. Id. at 722, 733.

From the "Anytown, USA" information that he downloaded from the IREM website, Dr. Ben-Zion used the median expense percentages for low-rise apartment complexes with more than twenty-four units. Id. at 725; see also id. at 725 (acknowledging that the data used by Dr. Ben-Zion was derived from information concerning thirty-seven buildings with an average of 222 apartments per building). Dr. Ben-Zion represented that this data reflected that on average, net operating income was 63.3% of gross possible income. Id. at 469-70. He further represented that the remaining 36.7% of gross possible income reflected expenses; for example, the management fee was 3.8% of gross possible income. Id. at 470. In estimating plaintiff's expenses using the IREM information, Dr. Ben-Zion used the following categories and items of expenses: management and administrative costs (management fee and other administrative costs), operating costs (supplies, fuel for heating, electricity, water, gas, building services, other administrative costs), maintenance (security, ground maintenance, maintenance/repairs, painting and decorating), real estate taxes, other taxes and permits, insurance, recreational amenities, and other payroll. PX 52 at 3-9; see also Tr. 728 (Ben-Zion) (reflecting Dr. Ben-Zion's acknowledgment that he used expense items that were not applicable to Sonoma Village Apartments). Applying the percentages associated with each expense item, Dr. Ben-Zion calculated the annual expenses that plaintiff would have incurred in the unrestricted scenario. PX 52 at 2. Then, as he did when estimating expenses under the first method, Dr. Ben-Zion divided each expense item in half for 2011 to reflect his assumption that expenses would be

incurred for only six months; in doing so, he again did not account for expenses that would be incurred for the entire year regardless of the amount of income received. Id.

Then, under both methods for estimating expenses, Dr. Ben-Zion added an estimated interest expense, PX 52 at 2; PX 53 at 2, to account for the "opportunity cost of invested capital," Tr. 450 (Ben-Zion). Dr. Ben-Zion explained that if Richard Gullotta proceeded as he intended and paid the $1.2 million balance of the loan with cash instead of refinancing, he would lose the opportunity to earn money by investing that cash elsewhere. Id. at 453. Dr. Ben-Zion concluded that the best–and most conservative–method of accounting for this opportunity cost was to deduct from plaintiff's estimated income the interest that plaintiff would have paid if it refinanced the loan. Id. at 453-54. For his calculations, Dr. Ben-Zion assumed that plaintiff would have obtained a thirty-year mortgage on July 1, 2011, at a 4.3% interest rate. Id. at 454.

The 4.3% interest rate used by Dr. Ben-Zion was provided by Mr. Burwell.[28] Mr. Burwell, in turn, obtained this interest rate by contacting a local, privately owned, commercial bank that lends money to apartments. Id. at 219 (Burwell); see also id. at 241-42 (explaining that "the local bank market is stronger for smaller multifamily properties" while other lenders, such as life insurance and credit companies, are more likely to finance mortgages for large apartment properties acquired by institutional investors), 328 (noting that nationwide lending rates for large institutional properties are not applicable because those properties and their buyers are different from the type of property and ownership in this case). He was "quoted a lending rate of 4.3% for a five-year loan with a thirty-year amortization" for 2011. Id. at 219; see also id. at 284-85 (indicating that these were the terms on the bank's offering sheets, but that Mr. Burwell did not know whether the bank actually lent money under these terms), 326 (indicating that loan terms are confidential). Although one other bank was a major lender to apartments in the area, Mr. Burwell did not contact that bank to obtain their 2011 lending rates. Id. at 285. Nor did Mr. Burwell use the rates published in the Appraisal Institute's national magazine, which are similar to the "national rates for institutional properties" published in the Korpacz survey. Id. at 287; see also id. at 932-33 (Weinberg) (explaining that the Korpacz survey is a widely used resource that provides the expected changes in rents and expenses based on a survey of market participants). However, he noted that the 4.3% interest rate was within the range of rates provided in Mr. Gerber's rent survey. Id. at 286, 339 (Burwell); see also id. at 327 (noting that Mr. Gerber's position as a broker allows him access to detailed information regarding mortgage interest rates).

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[28] Although Dr. Ben-Zion did not affirmatively state the source of the interest rate, the evidence in the trial record reflects that the interest rate was provided by Mr. Burwell. See Tr. 219, 283-84 (Burwell).

Ultimately, Dr. Ben-Zion calculated the amount that plaintiff's estimated income should be reduced each year to reflect the mortgage interest that it would have paid.[29] PX 52 at 2; PX 53 at 2.

iii. Total Past Lost Profits

Once he determined plaintiff's net income for the 2011 to 2016 time period in both the restricted and unrestricted scenarios, Dr. Ben-Zion subtracted the former from the latter to arrive at plaintiff's lost profits. Tr. 471 (Ben-Zion). Using the expense data provided by Ms. Williams, Dr. Ben-Zion determined that plaintiff would have realized net income of $1,043,539 in the unrestricted scenario and, after subtracting the $146,330 that plaintiff actually realized in the restricted scenario, concluded that plaintiff lost profits of $897,209. PX 53 at 1-2. Alternatively, using the expense information that he downloaded from the IREM website, Dr. Ben-Zion determined that plaintiff would have realized net income of $761,375 in the unrestricted scenario and, after subtracting the $146,330 that plaintiff actually realized in the restricted scenario, concluded that plaintiff lost profits of $615,045. PX 52 at 1-2. Dr. Ben-Zion did not discount either amount–$897,209 or $615,045–because they represented past damages, which "would normally not be discounted to present value." Tr. 420 (Ben-Zion); accord id. at 506-07 ("[W]e don't discount past damages for interest or inflation."). Indeed, he commented that one would only discount past damages if there was some uncertainty regarding what the income or expenses would be; in such cases, a risk factor could be applied. Id. at 495, 508; accord id. at 506 ("[Y]ou don't need the interest rate to discount the past, only the . . . risk and uncertainty factor."), 509 ("Past damages are never discounted for interest."); see also id. at 507 ("[I]f you want to apply a risk factor to the past and the risk factor is 1%, you can discount the total calculations by 1% for the past.").

b. Future Lost Profits

i. Restricted Scenario

With respect to the second time period plaintiff specifies, the date of trial through the date that the loan agreement will expire, Dr. Ben-Zion appears to have projected plaintiff's future net income in the restricted scenario by increasing plaintiff's projected gross rental income for 2016 by a set percentage each year through 2035, determining projected net rental income by adjusting the projected gross rental income to account for projected vacancies and the receipt of other projected income, increasing plaintiff's projected expenses for 2016 by a set percentage for each

[29] Because Dr. Ben-Zion assumed that plaintiff would obtain a mortgage on July 1, 2011, he specified only six months of interest expense for 2011. PX 52 at 2; PX 53 at 2. However, Richard Gullotta was prepared to prepay the balance of the loan at the time of the government's breach of contract on January 3, 2011. See Jt. Stip. ¶ 9; JX 5.

year through 2035, and then subtracting the projected expenses from the projected net rental income to arrive at each year's projected net income.[30]

To determine the percentage for increasing plaintiff's projected gross rental income, Dr. Ben-Zion considered two factors: (1) that from 2005 to 2015, rents at Sonoma Village Apartments increased annually by 2%,[31] id. at 426-27; and (2) that the Congressional Budget Office projects that inflation will be approximately 2% per year for the next fifteen years, id. at 439. Accordingly, he opined that it was reasonable to project that the future rent growth rate in the restricted scenario would continue to be 2%. Id. at 437-39.

With respect to the percentage for increasing plaintiff's projected expenses, which is only applicable to the projections based on the data provided by Ms. Williams, Dr. Ben-Zion apparently used the same percentage that he used to increase plaintiff's projected expenses under the unrestricted scenario: 2%.[32] See id. at 738 (reflecting that Dr. Ben-Zion calculated future expenses by taking "what would have existed in 2016 for the expenses and increased them by 2%," but not specifying whether he took this approach in both the restricted and unrestricted scenarios); see also id. at 476, 478-79, 710-11 (indicating that Dr. Ben-Zion increased the amount of projected expenses in the unrestricted scenario each year by 2%–the rate of inflation projected by the Congressional Budget Office for the next fifteen years); PX 53 at 3-8 (reflecting a 2% increase in projected expenses in the unrestricted scenario for 2017 through 2035).

ii. Unrestricted Scenario

After calculating each year's projected net income under the restricted scenario, Dr. Ben-Zion performed the same task for the unrestricted scenario. To do so, he projected both the income that plaintiff would receive by charging market rents and the expenses that plaintiff would incur in operating Sonoma Village Apartments as a market-rate rental property.

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[30] There is no direct evidence regarding the precise methodology used by Dr. Ben-Zion to determine plaintiff's projected net income in the restricted scenario, but the trial record as a whole strongly suggests that Dr. Ben-Zion took this approach.

[31] Dr. Ben-Zion may have obtained this data from Mr. Burwell. See PX 39 (containing Mr. Burwell's determination that "[l]ong term restricted rent growth is estimated at 2.0%"); Tr. 200 (Burwell) (indicating Mr. Burwell's determination that, historically, rents in the restricted scenario increased annually by 2%).

[32] The trial record contains no direct evidence that Dr. Ben-Zion used the same approach in both scenarios; the only direct evidence of the rate for increasing projected expenses pertains to the unrestricted scenario. See Tr. 476, 478-79 (Ben-Zion).

Dr. Ben-Zion based his income projections on data provided by Mr. Burwell. Id. at 440-41, 480, 739-40; PX 52 at 1; PX 53 at 1. Mr. Burwell, in turn, determined that the long-term market rent growth rate would be 3.5%. PX 39; Tr. 197-98, 273-74, 291, 310, 325 (Burwell). He based his determination on Mr. Gerber's finding that the market rent growth rate in Sonoma Valley for 2011 through 2015 was slightly above 5%, Tr. 198, 274, 325 (Burwell), and his own assumption that market rents "would probably increase less going forward in the future once they get marked up to market," id. at 198; see also id. at 275 ("I do read a lot on rental trends in . . . Sonoma County [and the] Bay Area."). Mr. Burwell did not base his determination on inflation rates because of his belief that the growth rate in market rents would continue to outpace the rate of inflation due to the insufficient supply of apartment units in Sonoma Valley. Id. at 199. Dr. Ben-Zion accepted Mr. Burwell's 3.5% growth rate and, using 2016 as the base year, projected the gross rental income for each year from 2017 to 2035. Id. at 440-41, 473 (Ben-Zion); see also id. at 480-81 (reflecting that Dr. Ben-Zion did not use the same growth rate that he used to increase future expenses–the projected rate of inflation–because "the rate of inflation and the rate of rent increases diverge[d] from each other considerably . . . in the past").

Next, Dr. Ben-Zion reduced the projected annual gross rental income amounts to account for projected vacancies using the vacancy rate supplied by Mr. Burwell. Id. at 473; accord PX 52 at 3-9; PX 53 at 3-8. Mr. Burwell, in turn, determined that the long-term vacancy rate would be 3%. PX 39; Tr. 194, 196 (Burwell). He based his determination on two factors: (1) the fact that the vacancy rate in Sonoma County for the prior ten years "has probably been 2% or less," Tr. 194 (Burwell); and (2) his assumption that increased demand for apartment units will result in increased supply, and, consequently, a higher vacancy rate, id. at 194, 196. He did not account for collection losses in his projected long-term vacancy rate, id. at 288, because collection losses are likely nominal, collection losses are not tracked for Sonoma Valley, and there is no information upon which he could estimate collection losses, id. at 328-29. After applying this vacancy factor, and adding an amount for "other income" (2.3% of gross rental income), Dr. Ben-Zion obtained plaintiff's projected net rental income for each year from 2017 to 2035. PX 52 at 3-9; PX 53 at 3-8.

Dr. Ben-Zion then used–as he did for the 2011 to 2016 time period–two methods to project plaintiff's future expenses in the unrestricted scenario. Under the first method of projecting expenses, Dr. Ben-Zion used the data supplied by Ms. Williams for 2016 as a starting point.[33] PX 53 at 2-3; Tr. 476 (Ben-Zion). He then increased those projected expenses each year by 2%–the rate of inflation projected by the Congressional Budget Office for the next fifteen years. PX 53 at 3-8; Tr. 476, 478-79, 710-11 (Ben-Zion); see also id. at 547 (Ben-Zion) (reflecting that Dr. Ben-Zion increased real estate taxes by 2% per year due to the 2% limit imposed by Proposition 13), 709-10 (reflecting that if there was a management fee, Dr. Ben-Zion

[33] Again, Dr. Ben-Zion did not include any amounts for a management fee or for bookkeeping and accounting services, PX 53 at 3-8, even though he believed that management fees should be accounted for, Tr. 450, 680-83, 706 (Ben-Zion), and Ms. Williams believed that there would be some cost for bookkeeping and accounting services, id. at 366 (Williams).

would have increased it by 3.5% per year). He explained that it was reasonable to use this projected inflation rate because it was determined by forecasting experts and because economists consider the Congressional Budget Office to be a reliable source. Tr. 481-82 (Ben-Zion). In addition, he noted that the Congressional Budget Office's inflation rate is derived from the nationwide Consumer Price Index and applies to all goods and services. Id. at 482, 711; see also id. at 711 (noting that one of the components of the Consumer Price Index is rents). Under the second method of projecting expenses, Dr. Ben-Zion applied the percentages set forth in the information that he downloaded from the IREM website to each year's projected gross rental income, id. at 722, with the exception of real estate taxes, which he increased by 2% per year due to the 2% limit imposed by Proposition 13, id. at 729, 743; see also id. at 744 (reflecting Dr. Ben-Zion's acknowledgment that real estate taxes included both ad valorem taxes and direct assessments, and that Proposition 13 did not apply to direct assessments). See generally PX 52 at 3-9. Then, under both methods for projecting expenses, Dr. Ben-Zion added the projected interest expense described above. PX 52 at 3-9; PX 53 at 3-8. Upon taking this final step, Dr. Ben-Zion arrived at a projected net income for each year from 2017 to 2035. PX 52 at 3-9; PX 53 at 3-8.

iii. Discounting to Present Value

Once Dr. Ben-Zion determined plaintiff's projected net income for each year from 2017 to 2035 in both the restricted and unrestricted scenarios, his next step was to discount those amounts to their present value. Tr. 591-92 (Ben-Zion); see PX 52 at 3-9 (showing that Dr. Ben-Zion discounted the projected income for each year in the unrestricted scenario); PX 53 at 3-8 (same); see also Tr. 308 (Burwell) ("[T]he discount rate applies to a future stream of income or cash flows . . . ."), 420 (Ben-Zion) ("The future has to be discounted to present value as of the date of the trial."). To accomplish this task, he was required to select an appropriate discount rate.

According to Dr. Ben-Zion, a discount rate generally includes two components–an "interest rate" and a "risk and uncertainty rate." Tr. 497-98 (Ben-Zion). But see id. at 766 (explaining that a discount rate "potentially" has three components: (1) a risk and uncertainty component, (2) an interest component, and (3) an inflation component). In this case, plaintiff's experts opined, the discount rate is comprised of a capitalization rate–which itself includes an interest component and a risk component–and a growth rate. Id. at 206-07, 212, 302, 334-35 (Burwell), 494-95, 767 (Ben-Zion); see also id. at 308 (Burwell) (indicating that another name for the "capitalization rate" is the "property discount rate").

Mr. Burwell provided Dr. Ben-Zion with a 7% discount rate. Id. at 206 (Burwell), 492, 495-96, 762-63 (Ben-Zion); PX 39. This discount rate includes two components: (1) a capitalization rate of approximately 5.5%, Tr. 209, 334 (Burwell), which Mr. Burwell based on his knowledge of the Sonoma Valley market and data from Mr. Gerber indicating an average capitalization rate for 2015 of 5.47%, id. at 208-09; PX 42, and (2) a growth rate of "a little less than 2%," Tr. 212 (Burwell). See generally id. at 206, 210, 304-05 (explaining that arriving at a

discount rate is "somewhat subjective" in that there are no published discount rates for the North Bay area that can be used as a reference). The rate does not account for any debt that plaintiff might have or incur on Sonoma Village Apartments. Id. at 309.

Adopting the 7% discount rate, Dr. Ben-Zion discounted the net income figures for each year in the unrestricted scenario, presumably discounted the net income figures for each year in the restricted scenario,[34] and then summed the resulting amounts under each scenario. See PX 52; PX 53. For the unrestricted scenario, he determined that under the method of projecting expenses based on the data provided by Ms. Williams, plaintiff's total future net income would be $5,261,608 in present dollars, PX 53 at 1, 8, and that under the method of projecting expenses based on the information that he downloaded from the IREM website, plaintiff's total future net income would be $3,969,912 in present dollars, PX 52 at 1, 9. Then, for the restricted scenario, he determined that plaintiff's total future net income would be $86,500 in present dollars. PX 52 at 1; PX 53 at 1. Subtracting the projected profits in the restricted scenario from the projected profits in the unrestricted scenario, Dr. Ben-Zion concluded that plaintiff's future lost profits were either $5,175,108 (using Ms. Williams's data), PX 53 at 1, or $3,883,412 (using IREM information), PX 52 at 1.

c. Total Lost Profits

To determine plaintiff's total lost profits from the date that the government breached the contract to the date that the loan agreement will expire, Dr. Ben-Zion summed his determinations of past lost profits and future lost profits, as reflected in the following table:

[34] There is no direct evidence that Dr. Ben-Zion used a 7% discount rate in the restricted scenario, but given that the trial record contains no evidence that plaintiff used a discount rate other than 7%, the court presumes that Dr. Ben-Zion used the same 7% discount rate in both scenarios.

	Using Ms. Williams's Data		Using IREM Information	
Past				
Unrestricted Scenario	$1,043,539		$761,375	
Restricted Scenario	$146,330		$146,330	
Net Lost Profits		$897,209		$615,045
Future				
Unrestricted Scenario	$5,261,608		$3,969,912	
Restricted Scenario	$86,500		$86,500	
Net Lost Profits		$5,175,108		$3,883,412
Total Lost Profits		$6,072,317		$4,498,457

PX 52 at 1; PX 53 at 1. In short, when basing his projected expenses on the data provided by Ms. Williams, Dr. Ben-Zion determined that plaintiff's lost profits were $6,072,317, PX 53 at 1, and when basing his projected expenses on the information that he downloaded from the IREM website, Dr. Ben-Zion determined that plaintiff's total lost profits were $4,498,457, PX 52 at 1.

d. Using Fair Market Value to Test the Reasonableness of the Lost Profits Calculations

After calculating plaintiff's total lost profits, Dr. Ben-Zion tested the reasonableness of his conclusions by calculating the damages that plaintiff would receive under the lost asset methodology. Tr. 548 (Ben-Zion). The starting point for his test was the fair market value of Sonoma Village Apartments in the unrestricted scenario in 2016, as calculated by Mr. Burwell.[35] Id. at 549; accord PX 44. Dr. Ben-Zion distinguished the determination of a property's fair market value from the determination of the equity and debt held in the property, noting that "the value of the property is independent of what the debt is of its owners." Tr. 759 (Ben-Zion); accord id. at 760 ("[I]f you are just estimating the fair market value of the property, the debt on the property has no impact on the value."). Determining the amount of equity in a property, he

[35] According to the trial transcript, Dr. Ben-Zion testified that the fair market value calculated by Mr. Burwell was $5,000,070. See Tr. 549 (Ben-Zion). In light of the information contained in the exhibit prepared by Mr. Burwell, PX 44, the amount set forth in the transcript reflects a transcription error or a misstatement by Dr. Ben-Zion.

explained, requires a threshold determination of the property's fair market value, and the subtraction from that value of the amount of any debt held on the property. Id. at 760; accord id. at 761 ("There is no independent way of valuing the fair market value of the equity without first determining the fair market value of the property.").

Mr. Burwell determined that the fair market value of Sonoma Village Apartments was $5,070,000; he arrived at this amount by multiplying $506,724, his estimated gross rental income generated by the property in 2016, by ten, his estimated gross rent multiplier for 2016. PX 44; accord Tr. 203, 215, 295 (Burwell); see also id. at 201 (explaining that the gross rent multiplier for a particular property is the sales price of the property divided by the gross rents generated by the property), 201-02 (indicating that gross rent multipliers are used by lenders and borrowers, and are "strongly relied upon [by] buyers of smaller apartment complexes, properties that are twenty to fifty units in size"), 297-98 (reflecting that Mr. Burwell determined fair market value using a "sales approach"). But see Tr. 982-84 (Weinberg) (labeling the gross rent multiplier method of valuation as "the least accurate approach" and stating that such an approach should only be used, if at all, for form-based appraisals of "very small properties"). He estimated the property's gross rental income using the data he obtained from Mr. Gerber. Tr. 203, 215 (Burwell). Similarly, Mr. Burwell used Mr. Gerber's data to determine the gross rent multiplier; specifically, he used an average of gross rent multipliers for recent comparable sales in Sonoma County. Id. at 204, 215; see also PX 42 (indicating that in 2014-2015, the average gross rent multiplier in Sonoma County was 10.2); Tr. 205 (Burwell) (averring that a gross rent multiplier of ten "is very reasonable").

Next, from the $5,070,000 fair market value, Dr. Ben-Zion subtracted the value of Sonoma Village Apartments in the restricted scenario. Tr. 549 (Ben-Zion). Mr. Burwell had determined that the property had no value in the restricted scenario. Id. at 205-06 (Burwell), 549 (Ben-Zion). However, Dr. Ben-Zion opted to use the value determined by defendant's expert, Mr. Weinberg: $167,000. Id. at 549-51 (Ben Zion); see also DX 12 at 2 (indicating that the value of the property in the restricted scenario would be $167,472); DX 14A (same); Tr. 975 (Weinberg) (same).

Dr. Ben-Zion further reduced the $5,070,000 fair market value by the value of Sonoma Village Apartments in 2035 in the unrestricted scenario, in present dollars. Tr. 551 (Ben-Zion). This amount–$725,000–was based, once again, on data supplied by Mr. Weinberg (a terminal value of $3,800,000 and an 8.75% discount rate). Id. at 551-52; see also DX 11A at 2 (indicating that the property had a terminal value of $3,820,292 in 2035 in the unrestricted scenario).

The final amount that Dr. Ben-Zion subtracted from the $5,070,000 fair market value was the residual value of Sonoma Village Apartments in 2035 in the restricted scenario. Tr. 552-53 (Ben-Zion). Mr. Burwell indicated that in 2035, the property would be a teardown, valueless aside from the land value (which includes the right to build a thirty-unit apartment complex). Id. at 229, 289-91 (Burwell); accord id. at 205-06 (indicating that the property has no value in the restricted scenario); see also id. at 552-53 (Ben-Zion) ("I don't know what is today's fair market

value. I can only tell you what Mr. Burwell said. I understood he said that it has no market. . . . That suggests zero value. But maybe it is not zero. . . . I will leave it up to Your Honor to decide what value it might have under the restricted scenario.").

Performing the calculations described by Dr. Ben-Zion results in a total amount of $4,178,000. Because this amount is "close to" his calculated future lost profits of either $5,175,108 or $3,883,412, id. at 553 (Ben-Zion), Dr. Ben-Zion implied that his calculated future lost profits were reasonable, see id. at 554-55 (explaining that Mr. Weinberg's lost asset value determination was not reasonable because it was premised on incorrect inputs).

2. Defendant's Approach

Defendant does not dispute that plaintiff is entitled to expectancy damages. Rather, it disputes the methodology chosen by plaintiff to measure its damages and the amount of lost profits that plaintiff calculated using that methodology. Accordingly, through its expert, Mr. Weinberg, defendant provides its own determination of plaintiff's lost profits using a lost value approach, concluding that plaintiff is entitled to recover expectancy damages of $1,090,000. See generally DX 14A.

Because Mr. Weinberg measured plaintiff's damages by the value of Sonoma Village Apartments that plaintiff lost as a result of the government's breach of contract, he did not calculate damages separately for the pretrial and posttrial time periods. Instead, he calculated damages as of the date of the government's breach–January 3, 2011. Id.; Tr. 969 (Weinberg); see also Tr. 969 (Weinberg) (reflecting that Mr. Weinberg calculated damages through September 2035), 1020 (explaining that "[y]ou can't take into consideration actual future events," but must instead "determine what the expectation was of investors, buyers, and sellers in the market as of the January 2011 date"). In broad strokes, Mr. Weinberg first determined the value of Sonoma Village Apartments in the unrestricted scenario by projecting plaintiff's income, expenses, and debt service; deducting the renovation costs and the income projected to be lost during the renovations; making adjustments to account for the value of the property at the end of the damages period;[36] and discounting the resulting cash flow to its present value. See DX 11A. Then, Mr. Weinberg determined the value of Sonoma Village Apartments in the restricted scenario by projecting plaintiff's income, expenses, and debt service; making adjustments to account for the value of the property at the end of the damages period;[37] and discounting the

[36] These adjustments appear on the spreadsheet summarizing Mr. Weinberg's calculations in the unrestricted scenario. See DX 11A at 2 (indicating, under the heading "Reversion Calculation," a "Terminal Rate" of 8%, a "Sales Cost" of 4%, a "Terminal Value" of $3,820,292, a "Loan Payoff" of $407,202, and "Net Proceeds" of $3,413,090). However, Mr. Weinberg did not explain the adjustments during his trial testimony.

[37] These adjustments appear on the spreadsheet summarizing Mr. Weinberg's calculations in the restricted scenario. See DX 12 at 2 (indicating, under the heading "Reversion

resulting cash flow to its present value. See DX 12. Finally, Mr. Weinberg subtracted the value of Sonoma Village Apartments in the restricted scenario from the value of Sonoma Village Apartments in the unrestricted scenario, and then adjusted the resulting amount to account for a presumed judgment date of December 31, 2016. See DX 14A; Tr. 870-71, 968-69 (Weinberg).

To prepare his report on plaintiff's damages due to the government's breach of contract, Mr. Weinberg visited Sonoma Village Apartments in March 2016, touring the property and its neighborhood. Tr. 871-73 (Weinberg). He found the property to be of "very average construction typical with section 515 developments, and . . . in fair to average condition . . . ." Id. at 881. He also found the property to be "generally functional" as a section 515 property, and "generally functional," but "at the lower end of that functionality," as a market-rate rental property. Id. at 882.

In addition to visiting Sonoma Village Apartments, Mr. Weinberg conducted a market rent survey for seven properties that he deemed reasonably comparable to Sonoma Village Apartments. Id. at 873, 875, 992-93; see also id. at 877 (indicating that he ascertained the primary market area for Sonoma Village Apartments–the area from which most of the property's tenants will come–to assist in identifying comparable properties). As part of his survey, he attempted to obtain, in addition to current rents, information regarding rent concessions, amenities (both inside the units and for the property as a whole), who pays for utilities, any renovations, and the general operation of the property. Id. at 874; accord id. at 884-86. He also sought rents for 2011, but was unable to obtain them. Id. at 1002-03. Further, Mr. Weinberg performed several other analyses, including analyses of the state of the local economy as of the end of 2010, id. at 875-76, the area's demographics as of the end of 2010, id. at 876, the area's median income at the end of 2010, id. at 878; see also id. at 878-79 (noting that the median income for the primary market area was lower than the median income for Sonoma County, which, in turn, was higher than the national median income), and Sonoma Village Apartment's neighborhood, id. at 879-80.

a. Unrestricted Scenario

After collecting the data he deemed relevant, Mr. Weinberg determined the rents that plaintiff could have charged had the government not breached the contract, in other words, the rents that plaintiff could have charged in the unrestricted scenario. Mr. Weinberg based his estimated rents on the information that he obtained from his survey of current market rents for the properties he found to be comparable to Sonoma Village Apartments, adjusting the amounts for differences in included utilities and amenities. Id. at 883, 889, 891, 894, 993. Once he determined the market rents that could be achieved by Sonoma Village Apartments for 2016, he deflated those rents by 35% to ascertain the rents that Sonoma Village Apartments could have

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Calculation," a "Terminal Rate" of 8%, a "Sales Cost" of 4%, and "Net Proceeds" of $1,409,316, and further indicating, under a column titled "Reversion Year 2036," net income of $117,443). However, Mr. Weinberg did not explain the adjustments during his trial testimony.

obtained on the open market in 2011. Id. at 895-96, 913, 926, 995-96; DX 7A; see also id. at 898, 912, 1028, 1032 (explaining that his adjustment removed the real estate market trends from 2011 to 2016); cf. id. at 895, 898 (reflecting that Mr. Weinberg would have liked to have used data from 2011 to determine achievable market rents for 2011, but he was unable to go back in time to perform such a survey). Mr. Weinberg opined that his approach–using current rents and deflating them back to the desired date–was "standard practice," but he could not identify any literature that supports the use of his approach. Tr. 1006 (Weinberg). He also agreed that his results do not comport with what actually happened to market rents from 2011 though 2016, but that they reflect "what an investor would have expected to have happened as of 2011." Id. at 1029; accord id. at 1030 ("[When you are] expecting what's going to happen to your property over the next however many years, you're going to base it on information that you had at the time."), 1034 ("People sitting . . . in January 2011 did not have the expectation there was going to be substantial rent growth over the next few years, . . . and no investor would have considered it."); see also id. at 922-23 (indicating that the Uniform Standards of Professional Appraisal Practice and the standards of the Appraisal Institute contain "very specific guidelines and instructions on how you have to deal with retrospective values," and that "you can[not] take into consideration the events that occurred that you would not have known at the time after the date of value").

Mr. Weinberg derived the 35% deflation rate from Sonoma County rent data published by Real Answers, an entity that collects real estate data. Id. at 896-87, 996; see also id. at 998 (acknowledging that Real Answers did not specifically break out data for Sonoma Valley), 1003-04 (reflecting Mr. Weinberg's inability to obtain deflation rates from comparable properties), 1006-07 (reflecting that Mr. Weinberg did not encounter Mr. Gerber's rent surveys during his research). He then checked his conclusion by reviewing a rent survey that Novogradac had conducted in another town in Sonoma County–Rohnert Park–in 2009. Id. at 898, 996, 1000-02. Mr. Weinberg did not use or rely on the Levy appraisal to project plaintiff's damages even though he had access to it, id. at 1008, 1011, 1124, because, he averred, it would violate appraisal standards to use the data contained in another appraisal report without verifying it himself, id. at 1014; accord id. at 1113 ("I can't rely on other people's work. So anything that I would have . . . used from [the Levy appraisal], I would have had to have reconfirm[ed] the data . . . ."), 1125 ("I can't just trust somebody else's third-party report."). Mr. Weinberg's conclusions are summarized in the following table:

Unit Type	2016 Achievable Market Rents	Adjusted 2011 Rents
1 Bed/1 Bath	$1500	$975
2 Bed/1 Bath	$1750	$1138
3 Bed/1 Bath	$1850	$1203
3 Bed/1.5 Bath	$2025	$1316

DX 7A.

Using the rents that he determined for 2011, Mr. Weinberg calculated plaintiff's estimated gross rental income for 2011. DX 11A. Then, to that amount, Mr. Weinberg added an estimated amount for other income (2.7% of gross rental income) and subtracted an estimated amount to account for vacancies (5% of gross rental and nonrental income) to determine plaintiff's estimated net rental income for 2011.[38] Id.; see also Tr. 929-30 (Weinberg) (reflecting that Mr. Weinberg's estimated vacancy losses incorporated estimated collection losses, in other words, amounts that plaintiff might expect to lose due to tenants not paying rent), 1039 (reflecting that Mr. Weinberg's vacancy rate was "an estimate based on a variety of data points"), 1040-41 (reflecting that Mr. Weinberg used an estimated 5% vacancy rate, which incorporates an estimated 2-3% rate for vacancies and an estimated 1-3% rate for collection losses), 1041-42 (reflecting that Mr. Weinberg's estimate of collection losses is derived from his survey of operating expenses for properties he found comparable to Sonoma Village Apartments, which is described in more detail below). However, due to the need to account for the time that it would take for Sonoma Village Apartments to convert from 100% restricted rents to 100% market rents, Tr. 915 (Weinberg), Mr. Weinberg did not use the net rental income that he calculated for 2011 as the baseline for projecting plaintiff's net rental income for 2012 and beyond. Rather, as explained in the following paragraph, Mr. Weinberg separately projected plaintiff's net rental income for 2012 and 2013 and then used 2014 as the baseline for subsequent years.

According to Mr. Weinberg, the conversion from 100% restricted rents to 100% market rents generally does not occur all at once because tenants are entitled to remain in their units pursuant to the terms of their leases until the leases expire, tenants are entitled to sixty days advance notice of rent increases, and property owners want to avoid the bad publicity that might result from evicting all of their lower-income tenants at the same time. Id. at 915-17, 1088, 1090-91. Instead, Mr. Weinberg stated, property owners typically find it most prudent to wait for tenants to leave on their own volition due to the expiration of their leases and the subsequent increase in rent. Id. at 917-18, 1088, 1090-91, 1094-95, 1138-39; see also id. at 919, 1090-92

[38] Although Mr. Weinberg uses the term "effective gross income" to describe the adjusted amount, the court uses the term "net rental income" to be consistent with plaintiff's usage.

(acknowledging that property owners sometimes offer incentives to tenants to terminate their leases early), 1095 (remarking that "85% of the tenants turn over in the first two years"). Mr. Weinberg explained that in such cases, appraisers typically assume a three-year conversion period, and that a three-year time frame is realistic.[39] Id. at 918-19; see also id. at 1095 (reflecting that Mr. Weinberg's opinion is based on his "experience with . . . close to two dozen repositionings where [he] actually worked with property owners to reposition the property" and what "is actually . . . happening at properties in the area"), 1137-38 (clarifying that his repositioning experience was with multifamily properties in general, and not just with affordable housing). But see id. at 1089 (reflecting that Mr. Weinberg did not know the length or expiration date of the leases at Sonoma Village Apartments, but that his prior experience with the United States Department of Agriculture suggested to him that plaintiff uses one-year leases), 1136 (reflecting Mr. Weinberg's understanding, based on experience, that Rural Development uses one-year leases for section 515 properties). Thus, Mr. Weinberg's projected gross rental income for 2011, 2012, and 2013 reflects a mix of restricted and market rents. Id. at 919-20. From 2014 forward, Mr. Weinberg's projected gross rental income–and, consequently, his projected net rental income–reflects only market rents. Id. at 920, 1027, 1031-32.

Next, Mr. Weinberg estimated the expenses that plaintiff would have incurred in 2011. He did so by examining the historic expenses incurred by Sonoma Village Apartments; he gave this data a great deal of weight, but recognized that certain expenses would be higher in the unrestricted scenario. Id. at 928-29. He also examined the expenses incurred by other properties "in the area" that he obtained from audited information in Novogradac's possession. Id. at 930-31, accord id. at 1068. Specifically, Mr. Weinberg "attempt[ed] to identify properties of similar size, geographic location, and . . . geographic similarities in terms of demographics to use as comparables." Id. at 1063; accord id. at 1068 (reflecting that Mr. Weinberg "extracted data . . . for properties that are most similar in size, age, condition, and general geographic characteristics"); see also id. at 1063-67 (reflecting the similarities and differences that Mr. Weinberg perceived between Sonoma Village Apartments/Sonoma Valley and his selected comparable properties/locations); cf. id. at 1061-62 (reflecting that Mr. Weinberg did not consider data from the IREM to estimate the expenses that plaintiff would incur in 2011). The Novogradac database included information from eight properties that met Mr. Weinberg's criteria; some of the pertinent characteristics of these properties are summarized in the following table:

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[39] Defendant did not retain Mr. Krabbenschmidt to provide an opinion on plaintiff's expectancy damages. See infra Section V.B. Nevertheless, Mr. Krabbenschmidt testified that he had personally converted "very low-income housing to much more upscale housing," and that despite planning for a one-year conversion, the conversion actually took three years. Tr. 1193 (Krabbenschmidt).

Project Location[40]	Number of Units	Operating Expenses as a Percent of Revenue	Vacancy Collection Percentage
Santa Rosa, Sonoma County	111	50%	0%
Santa Rosa, Sonoma County	80	51%	0%
Santa Rosa, Sonoma County	120	57%	3%
Waterford, Stanislaus County	40	80%	7%
King City, Monterey County	50	65%	3%
Vallejo, Solano County	76	60%	6%
Gilroy, Santa Clara County	84	35%	4%
St. Helena, Napa County	50	76%	1%

DX 9. Using all of this information, id. at 931-32, Mr. Weinberg projected expenses for 2011 in eight categories: (1) administrative and marketing expenses, (2) maintenance and operating expenses, (3) utilities, (4) payroll, (5) management fees, (6) insurance, (7) real estate taxes, and (8) replacement reserve, DX 11A. Mr. Weinberg explained how he determined the projected expenses in six of these categories.

First, with respect to utilities and insurance, Mr. Weinberg based his projections on what actually occurred at Sonoma Village Apartments rather than on data from comparable properties. Tr. 1069, 1116 (Weinberg).

Second, with respect to payroll, Mr. Weinberg assumed that plaintiff would have, due to the size of Sonoma Village Apartments, two part-time, on-site employees: one to manage the property and the other to maintain the property. Id. at 940, 1078; DX 10. Although he

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[40] The court takes judicial notice, pursuant to Rule 201(b)(2) of the Federal Rules of Evidence, of the counties in which each project is located.

acknowledged that Richard Gullotta intended to manage the property himself and use contractors for maintenance issues, Tr. 1078-79, 1081 (Weinberg), and therefore would not actually incur these expenses, id. at 1082, he did not believe that an eighty- or ninety-year-old man with a full-time job could effectively perform these tasks, and that regardless of whether a property owner assumed these tasks without compensation, there remains a cost of performing these tasks that should be taken into account, id. at 942-43, 1079. Accordingly, Mr. Weinberg projected an amount for payroll for 2011. Id. at 940-41, 1078; DX 11A; see also Tr. 1079, 1134-35 (reflecting that if he assumed that Richard Gullotta would manage the property himself and rely on contractors, he would have eliminated the maintenance payroll expense, but increased the maintenance expense).

Third, with respect to management fees, Mr. Weinberg again acknowledged that Richard Gullotta intended to manage the property himself, Tr. 1078, 1081 (Weinberg), but explained that even when an owner self-manages a property, he would recommend that the owner "actually take an operating expense for that," id. at 1079. Therefore, he evaluated the management fees at comparable properties and determined that an appropriate fee would be 7% of plaintiff's estimated net rental income. Id. at 945.

Fourth, with respect to real estate taxes, Mr. Weinberg explained that real estate taxes in California have two components–an ad valorem tax based on the assessed value of the property and any direct assessments–and that, as Dr. Ben-Zion previously acknowledged, only the ad valorem tax is subject to the limits imposed by Proposition 13. Id. at 946; see also id. at 946, 1054-56 (noting that direct assessments have increased to make up for the limits imposed by Proposition 13). He further explained that because the ad valorem tax increases when the underlying property is sold, appraisers in California assume a sale, and the attendant reassessment of the property, when projecting the real estate taxes owed for the property. Id. at 946-47, 1057; see also id. at 947 (explaining that an appraisal is used to determine the market value of a property, and market value "only can be monetized in the form of an exchange" between a buyer and a seller), 1057-58 (same). Accordingly, to determine the real estate taxes owed by plaintiff in 2011, Mr. Weinberg assumed that Sonoma Village Apartments sold on the date that the government breached the contract, determined the new assessed value of Sonoma Village Apartments, calculated the ad valorem tax owed on that assessed value, and then added the direct assessments to the ad valorem tax. Id. at 946-47, 1050, 1057; accord id. at 1012; see also id. at 1046, 1049-50 (indicating that the direct assessment component of the 2011 real estate taxes was derived from the actual direct assessments); cf. id. at 1030, 1057-58 (acknowledging that the trial record does not include any evidence that plaintiff intended to sell Sonoma Village Apartments), 1073 (reflecting that had Mr. Weinberg not assumed a sale, his projected real estate taxes would be lower, which comports with the fact that his projected real estate taxes "deviate significantly from the actual[]" real estate taxes).

And fifth, with respect to the replacement reserve, Mr. Weinberg explained that it was "standard practice" for a property owner to set aside funds every year in a reserve account to be available for capital expenditures. Id. at 948. He further noted that there are "industry standards"

that describe a range of reasonable reserve amounts that are based on the unit mix and age of the property. Id. According to Mr. Weinberg, the range for a property similar to Sonoma Village Apartments is $300 to $400 per unit, and so he used $350 per unit in his calculations. Id. But see DX 11A (including an expense item for "Replacement Reserve," but failing to show an amount of $10,500 ($350 x 30 units) for 2011 or any year thereafter).

After estimating the total amount of expenses that would be incurred by plaintiff in 2011 in the unrestricted scenario, Mr. Weinberg subtracted that amount from the estimated net rental income for 2011 to determine estimated net income for 2011.[41] DX 11A; Tr. 954-55 (Weinberg).

Next, Mr. Weinberg projected plaintiff's income and expenses for 2012 through 2035 by applying a growth rate to the relevant baseline amounts. See generally DX 11A. With respect to projected net rental income, Mr. Weinberg used 2014 as the baseline year for applying the growth rate because that was the first year after the conversion to 100% market rents. See Tr. 919, 1015-16 (Weinberg). He determined that the appropriate growth rate was 2.5%. Id. at 932, 1085; see also id. at 1015-16 (explaining that his projected net income did not increase at an annual rate of 2.5% from 2011 to 2014 because the projected net income for those years is based on differing mixes of restricted and market rents). See generally DX 11A. He based this rate on data published in the Korpacz survey, his own discussions with investors, the interviews he conducted during his rent survey, and information from Novogradac's database. Id. at 932-33, 939, 1017-19; see also id. at 1018 (reflecting that Mr. Weinberg did not have access to long-term historical data regarding growth rates, but if he did, he would have considered it).

Then, with respect to projected expenses, Mr. Weinberg used 2011 as the baseline year for applying the growth rate. See generally DX 11A. He used the same 2.5% growth rate that he used for projecting future net rental income. Tr. 932, 1055, 1060, 1085 (Weinberg). He explained that it was standard practice to use the same inflation rate for rental income and expenses because it prevented the manipulation of property valuations that resulted from projecting that rental income increased at a greater rate than expenses. Id. at 934-35. He further explained that historically, the long-term trend was for rental income to increase at a similar rate as expenses. Id. at 935-36, 1055, 1130-31. Because Mr. Weinberg used the same growth rate to project future income and expenses, his projected expenses–postconversion–were 55.3% of his projected net rental income. Id. at 1070, 1118; cf. DX 9 (indicating that the comparable properties that Mr. Weinberg used to assist in his estimation of plaintiff's expenses had expense-to-income ratios of 50%, 57%, 80%, 65%, 60%, 35%, and 76%).

Once Mr. Weinberg projected plaintiff's net income for each year from 2011 through 2035, he reduced those amounts by debt service to arrive at an amount for after-debt cash flow. Id. at 954-55; DX 11A. To determine the amount of debt service for 2011, Mr. Weinberg reviewed information contained in "files from the time frame" that indicated "what interest rates

[41] Although Mr. Weinberg uses the term "net operating income," the court uses the term "net income" to be consistent with plaintiff's usage.

were in that market," and a Novogradac publication that provides information regarding mortgage interest rates for conventional and affordable multifamily housing that "tend[s] to be smaller . . . , noninstitutional grade properties." Tr. 950-51 (Weinberg); accord id. at 1083 (reflecting that Mr. Weinberg reviewed a Novogradac publication and "appraisal files from back around the time frame to see what actual rates were for properties that [Novogradac] worked on"). Mr. Weinberg assumed a $1,171,000 loan, which was the balance of plaintiff's current mortgage, and a 5.5% interest rate. Id. at 1083, 1119; see also DX 11A (indicating that the estimated debt service for 2011 was $59,959.80 and the estimated debt service for each subsequent year was $79,834).

After Mr. Weinberg determined each year's projected after-debt cash flow,[42] he discounted those amounts to their present value. To accomplish this task, he was required to select an appropriate discount rate. See also Tr. 956-57 (Weinberg) (indicating that while the determination of a discount rate is "not an exact science," it also is not subjective because it is based on mathematics and reason).

According to Mr. Weinberg, a discount rate generally includes two components, one that accounts for the "time value of money," and one that accounts for "the risk associated with a particular investment." Id. at 951. Mr. Weinberg described two types of discount rates: (1) an equity discount rate, which incorporates the risk that a property owner might not recover its equity in the property after any mortgages have been satisfied, and (2) a property discount rate, which is based on the assumption that there is no debt associated with the property. Id. at 952; see also id. (indicating that "equity tends to have a higher rate of return"). Because Mr. Weinberg projected plaintiff's cash flows on an after-debt basis, they were equity cash flows. Id. at 954-55. Therefore, he used an equity discount rate to determine present value. Id. at 954; see also id. at 957 (indicating that this approach was the accepted methodology in the appraisal industry). To determine the proper rate, he first calculated an overall discount rate by blending the appropriate equity rate of return and mortgage interest rate, arriving at 6.25%.[43] Id. at 953, 958-59; accord id. at 953 (indicating that the blended rate can be calculated by multiplying the equity rate of return by 25%, multiplying the mortgage interest rate by 75%, and then summing

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[42] For 2035, Mr. Weinberg added to the projected after-debt cash flow an amount to reflect the value of the property at the end of the contract period. DX 11A at 2; Tr. 551 (Ben-Zion). This amount–$3,413,090–equals the terminal value of the property–$3,820,292–minus the amount necessary for plaintiff to pay off the assumed loan–$407,202. DX 11A at 2.

[43] Although Mr. Weinberg testified that he arrived at a 6.3% overall discount rate, Tr. 959, 1099 (Weinberg), other evidence in the trial record reflects that this percentage is rounded up from 6.25%, see, e.g., id. at 507 (Ben-Zion) (reporting that Mr. Weinberg "says that the cap[italization] rate is 6.25%"), 1099 (Weinberg) (indicating that his discount rate was 8.75% and his growth rate was 2.5%).

the results[44]); see also id. at 1099 (labeling the 6.25% overall discount rate as the "equity capitalization rate," and not "a property capitalization rate"). Then, to that percentage, he added the same 2.5% growth rate that he used to project income and expenses forward from the baseline year, id. at 959, 1086, arriving at an 8.75% discount rate, id. at 1086, 1099. Applying the 8.75% discount rate to his projected after-debt cash flows in the unrestricted scenario, both prejudgment and postjudgment, Mr. Weinberg calculated a net present value of $1,629,059. DX 11A at 2; DX 14A.

b. Restricted Scenario

For the restricted scenario, Mr. Weinberg used the actual income and expenses from plaintiff's approved budget for 2011. Tr. 883, 927-28, 1020-21 (Weinberg). He then applied a 2.5% growth rate to determine the net rental income, id. at 1022; see also id. at 1024 (explaining that the 2.5% growth rate is "somewhat budget based" and that the growth rate actually experienced by Sonoma Village Apartments was "not important . . . because the limitation on distributions means [plaintiff is] not going to get the [net income] anyway"), and expenses, see DX 12 (reflecting that expenses increased by 2.5% each year), for each subsequent year. After Mr. Weinberg projected each year's net income, he subtracted an amount for debt service to arrive at a potential after-debt cash flow. DX 12; see also id. at Tr. 949 (Weinberg) (indicating that the amount Mr. Weinberg determined for debt service was based on the effective interest rate of the loan that plaintiff obtained from the government). Then, to account for the limitation on distributions imposed by Rural Development, Mr. Weinberg reduced those potential after-debt cash flows to determine plaintiff's projected maximum return on investment. DX 12; Tr. 1122 (Weinberg). As a consequence of the distribution limitation, Mr. Weinberg determined that plaintiff would obtain a maximum return of investment of $5310 every year. DX 12.

Mr. Weinberg applied two different discount rates to his projected maximum returns on investment. Id. at 2; Tr. 1096-97, 1121-22 (Weinberg). For the prejudgment period, he used a "safe rate" because there is no risk of the unknown associated with events that had already occurred. Tr. 1097, 1101-02 (Weinberg); see also id. at 1102 (explaining that the projected maximum returns on investment still needed to be discounted to reflect "the time value of money"). That rate was 4.12%. DX 12 at 2; see also Tr. 1098 (Weinberg) (indicating that the rate was "4% or 4.17%"), 1101 (indicating that the risk component of the 8.75% discount rate was 4.5% or 4.6%), 1121 (indicating that the rate was "just over 4%"). In contrast, for the postjudgment period, Mr. Weinberg used a 10.5% discount rate. DX 12 at 2; Tr. 1120 (Weinberg). This rate was based on the fact that plaintiff faced a limitation on distributions of 8% of its initial investment and a 2.5% growth rate. Tr. 1120 (Weinberg). After calculating the

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[44] Based on this information, the fact that Mr. Weinberg presumed a 5.5% mortgage interest rate, and the fact that Mr. Weinberg calculated a 6.25% blended discount rate, the following equation can be used to determine the equity rate of return: (equity rate of return × 25%) + (5.5% × 75%) = 6.25%. Solving the equation, the equity rate of return is 8.5%.

present value of each year's projected maximum return on investment,[45] Mr. Weinberg summed the resulting amounts, DX 12, calculating a net present value of $167,472, id. at 2; DX 14A.

c. Total Damages

To determine plaintiff's total damages, Mr. Weinberg began with the net present value of plaintiff's after-debt cash flow in the unrestricted scenario of $1,629,059. DX 14A; Tr. 968 (Weinberg). From that amount, he subtracted the stipulated renovation costs of $378,424. DX 14A. He also subtracted $144,598 for the rental income that plaintiff would lose during the renovations, an amount that was projected by Mr. Burwell. Id.; Tr. 968 (Weinberg); accord Tr. 1087 (reflecting that Mr. Weinberg did not separately project the amount of rental income that plaintiff would lose during renovations). From this subtotal, Mr. Weinberg subtracted the net present value of plaintiff's after-debt cash flow in the restricted scenario of $167,472 to determine that plaintiff would incur damages of $938,565 due to the government's breach of contract. DX 14A; Tr. 968, 1121 (Weinberg). Mr. Weinberg then adjusted that amount to account for a December 31, 2016 date of judgment by applying an annual 2.5% growth rate, Tr. 1097-98 (Weinberg), and concluded that plaintiff should receive compensation of $1,090,000, id. at 969; DX 14A.

d. Dr. Ben-Zion's Test to Assess the Reasonableness of His Calculations

As described above, Dr. Ben-Zion performed some additional calculations to test the reasonableness of his future lost profits determination, and in doing so, used data supplied by Mr. Weinberg. See supra Section IV.C.1.d. As his starting point, Dr. Ben-Zion used the 2016 fair market value of Sonoma Village Apartments in the unrestricted scenario determined by Mr. Burwell; Mr. Burwell, in turn, calculated the fair market value using estimated gross rental income and an estimated gross rent multiplier. See id. Consequently, Mr. Burwell's fair market value did not account for any debt that might be held on the property. Tr. 973 (Weinberg). However, all of the data from Mr. Weinberg that Dr. Ben-Zion used in his calculations–the $167,000 for the value of the property in the restricted scenario, the $3,800,000 for the value of the property in 2035 in the unrestricted scenario, and the 8.75% discount rate–were based on after-debt (in other words, equity) cash flows. Id.; accord DX 11A at 2; DX 12 at 2. Accordingly, Mr. Weinberg opined, Dr. Ben-Zion's calculations would not yield accurate results. Tr. 972-73 (Weinberg); see also id. at 982, 984 (remarking that Dr. Ben-Zion also improperly mixed Mr. Weinberg's 2011 data with Mr. Burwell's 2016 data).

Mr. Weinberg performed his own calculations to demonstrate what the results of Dr. Ben-Zion's test would have been had Dr. Ben-Zion taken all of his inputs from Mr. Weinberg's data. Id. at 974-76, 985. First, Mr. Weinberg calculated the value of the property in the unrestricted

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[45] For 2035, Mr. Weinberg added to the projected maximum return on investment an amount that apparently reflected the value of the property at the end of the contract period: $1,409,316. See DX 12 at 2.

scenario. Id. at 975-76; DX 28. He started with the amount that he determined represented the net present value of plaintiff's lost income in the unrestricted scenario–$1,629,059. DX 28; Tr. 975 (Weinberg); see also Tr. 975 (Weinberg) (noting that this amount is based on projected after-debt cash flows). From that amount he subtracted the stipulated renovation costs of $378,424 and the rental income that would be lost due to the renovations of $144,598. DX 28; Tr. 975 (Weinberg). He then added to the result the balance of plaintiff's loan–$1,171,708–to arrive at a value of $2,277,745. DX 28; Tr. 976, 985 (Weinberg).

Second, Mr. Weinberg calculated the value of the property in the restricted scenario. DX 28; Tr. 975-76 (Weinberg). He began with the amount that he determined represented the net present value of plaintiff's lost income in the restricted scenario–$167,472. DX 28; Tr. 975 (Weinberg); see also Tr. 975 (Weinberg) (noting that this amount is based on projected after-debt cash flows). He then added to that amount the balance of plaintiff's loan–$1,171,708–to arrive at a value of $1,339,180. DX 28; Tr. 976, 985 (Weinberg).

Finally, Mr. Weinberg subtracted his estimated value in the restricted scenario from his estimated value in the unrestricted scenario. DX 28; Tr. 976 (Weinberg). The result–$938,565–is the same amount that he projected for plaintiff's damages. Compare DX 28, and Tr. 976, 985-86 (Weinberg), with DX 14A, and Tr. 968 (Weinberg).

Mr. Weinberg then performed the calculations described by Dr. Ben-Zion using Mr. Burwell's data, rather than his own (for the most part). DX 29; Tr. 977-90, 986-87 (Weinberg). His starting point was Mr. Burwell's determination that the fair market value of Sonoma Village Apartments in 2011 in the unrestricted scenario was $3,660,000. PX 44; DX 29; Tr. 977, 980-81, 987 (Weinberg). Because this value incorporated the assumption that the property had been renovated, Mr. Weinberg subtracted from it the stipulated renovation costs of $378,424 and the rental income that would be lost due to the renovations of $144,598. DX 29; Tr. 977, 1108, 1112 (Weinberg). Further, because this value did not reflect the conversion of the property from affordable housing to market-rate housing, Mr. Weinberg subtracted from it $160,000, an amount he calculated to reflect a three-year conversion period. DX 29; Tr. 978, 1108-09, 1114 (Weinberg). Mr. Weinberg labeled the resulting amount–$2,976,978–"the as-is value of the property." Tr. 978, 987 (Weinberg).

From this "as-is value," Mr. Weinberg subtracted the balance of plaintiff's loan–$1,171,708–to determine the value of plaintiff's equity in Sonoma Village Apartments in the unrestricted scenario. Id. at 979, 987; DX 29. He then reduced this amount by the equity value that he calculated for the property in the restricted scenario–$167,472–and the terminal value of the property calculated by Dr. Ben-Zion based on his data–$725,000. DX 29; Tr. 979-80, 987 (Weinberg). He arrived at a figure of $912,798, which was similar to the result he achieved when using his own data. DX 29; Tr. 980, 987 (Weinberg). He therefore concluded that a correct application of Dr. Ben-Zion's test supported his own damages calculations. Tr. 980 (Weinberg).

D. Analysis

It is undisputed that plaintiff is entitled to expectancy damages in this case; indeed, the court finds that plaintiff has established, by a preponderance of the evidence, a sufficient basis for estimating its damages with reasonable certainty. Further, as noted above, the parties do not dispute certain aspects of the calculation of plaintiff's expectancy damages, such as the need to calculate plaintiff's net income in the restricted and unrestricted scenarios, the need to compare the restricted and unrestricted scenarios, and the need to discount plaintiff's future stream of income to its present value. Instead, the parties disagree on the proper methodology for calculating plaintiff's expectancy damages, whether postbreach evidence can be used to calculate plaintiff's expectancy damages, what data should be used to calculate plaintiff's projected income and expenses in both the restricted and unrestricted scenarios, and the proper discount rate or rates. The court, having carefully reviewed the evidence in the trial record, the parties' posttrial briefs, and the parties' closing arguments, resolves each dispute in turn.

1. Methodology for Computing Plaintiff's Expectancy Damages

As a threshold matter, the parties disagree on the methodology that should be used to calculate plaintiff's expectancy damages. As previously noted, such damages can be measured in this case in one of two ways: (1) by determining the value of Sonoma Village Apartments as a market-rate rental property and then subtracting from that amount the value of the property as-is, or (2) by determining the profits that plaintiff would have received from operating Sonoma Village Apartments as a market-rate rental property and then subtracting from that amount the profits that plaintiff will actually receive. See Anchor Sav. Bank, FSB, 597 F.3d at 1369; First Fed. Lincoln Bank, 518 F.3d at 1317 & n.4. Notwithstanding plaintiff's apparent use of the lost profits approach to calculate damages, defendant argues that plaintiff "elected to prove its damages based on the value of the apartment complex" and therefore used the incorrect standards to calculate its damages. Def.'s Posttrial Resp. 8. Defendant also argues that "[t]he proper method of calculating lost profits that are based entirely on a single asset is through a valuation of that asset at the time of breach." Id. at 4. Neither argument is convincing.

According to defendant, plaintiff "elected to prove its damages using the discounted cash flow method set forth in [Franconia Associates], which calculates the difference in the values of the property in the breach and non-breach worlds." Id. at 8. This assertion is based on a misreading of Franconia Associates. In Franconia Associates, a section 515 case, the plaintiffs' damages expert used what the court labeled a "discounted cash flow method" to determine the plaintiffs' damages. 61 Fed. Cl. at 753-54. Although the discounted cash flow method is a way to determine the market value of an income-producing asset, see Energy Capital Corp., 302 F.3d at 1331, the plaintiffs' damages expert used this method to calculate lost profits damages and not, as defendant asserts, to calculate lost asset damages, see, e.g., Franconia Assocs., 61 Fed. Cl. at 754 ("[T]he discounted cash flow method employed by [the expert] is typically used by economists, appraisers and damages experts and, if properly executed with the appropriate factual predicates, would establish the lost profits owed the . . . plaintiffs with the certainty

required by the law." (citing Energy Capital Corp., 302 F.3d at 1328-34)). Indeed, the court's description of the expert's approach mirrors the approach taken by plaintiff's experts in this case. See id. at 753-54; accord id. at 758 ("[The expert's] basic methodology was to compare the discounted cash flows that plaintiffs would earn under the program (the restricted model) with the discounted cash flows that they would have earned had they been allowed to prepay their mortgages and convert their properties to market-rate operations (the unrestricted model).").

Defendant's second contention–that plaintiff's expectancy damages calculation must be based on the value of Sonoma Village Apartments at the time of the breach of contract–fares no better. In advancing this argument, defendant blurs the distinction between the two methods for measuring expectancy damages articulated in Anchor Savings Bank, FSB (lost asset value and lost profits). It is certainly possible to determine the profits lost from a single asset without valuing the asset from which those profits arise; indeed, the Court of Federal Claims in Anchor Savings Bank, FSB measured a portion of the plaintiff's damages by the profits it lost from its single lost income-producing asset. See 597 F.3d at 1370. Accordingly, a plaintiff seeking to establish its expectancy damages using the lost profits approach need not conform to the standards for proving damages under the lost asset approach.

Moreover, to the extent that defendant is contending that plaintiff's expectancy damages may only be calculated using the lost asset method, the case law does not compel that conclusion. In First Federal Lincoln Bank, the United States Court of Appeals for the Federal Circuit ("Federal Circuit") remarked: "'When the defendant's conduct results in the loss of an income-producing asset with an ascertainable market value, the most accurate and immediate measure of damages is the market value of the asset at the time of breach–not the lost profits that the asset could have produced in the future.'" 518 F.3d at 1317 (quoting Schonfeld, 218 F.3d at 176). However, the Federal Circuit later noted in Anchor Savings Bank, FSB that neither First Federal Lincoln Bank nor Schonfeld "mandate[d] that one measurement method must invariably used, as opposed to the other," and that the lost asset approach may not be appropriate when the evidence that could be used to measure damages is a choice "between (1) equivocal evidence as to the market value of an income-generating asset many years earlier, unenhanced by interest, and (2) reliable evidence as to the actual earnings the asset would have produced over the pertinent period." 597 F.3d at 1369-70.

In this case, due to the ongoing government restrictions on plaintiff's use of the property, plaintiff has never had the opportunity to operate Sonoma Village Apartments as a market-rate rental property, meaning that there is no direct evidence of plaintiff's income and expenses in such a situation from which market value could be calculated. See generally PX 54 at 62 (explaining that the income approach for estimating the market value of a property, in which "the anticipated future benefits of property ownership" are converted "into an estimate of present value," is "the preferred technique for [valuing] income-producing properties"). Information from actual operations as a market-rate rental property would provide the best evidence in determining the market value of Sonoma Village Apartments. See also Neely, 285 F.2d at 443 (noting that lost profits for "a new enterprise" are difficult to ascertain, "especially . . . where the

breach occurred before operations began"); cf. First Fed. Lincoln Bank, 518 F.3d at 1317 ("The market value of [a] lost property reflects the then-prevailing market expectation as to the future income potential of the property, discounted by the market's view of the lower future value of the income and the uncertainty of the occurrence and amount of any future property."). Without direct evidence from actual operations, the market value of Sonoma Village Apartments would instead need to be determined by evaluating indirect evidence, such as the income received and expenses incurred by comparable properties operating on the open market. Such indirect evidence, which Mr. Weinberg used to estimate the market value of Sonoma Village Apartments, is the same type of evidence that is required to calculate the profits that plaintiff would have realized had it been able to operate Sonoma Village Apartments as a market-rate rental property from 2011 to 2035. In other words, the quality of the evidence necessary to determine lost asset damages is exactly the same as the quality of the evidence necessary to determine lost profits damages. Cf. Franconia Assocs., 61 Fed. Cl. at 757 (remarking that notwithstanding the lack of "a record of operating as a commercial property," a section 515 property owner's "ability to recover lost profits based on the extension of an existing business is not barred by a per se rule of disallowance, but rather hinges on the quality of the evidence presented"). Thus, plaintiff's decision to measure its damages by its lost profits, as the plaintiffs did in Franconia Associates, is both legally sound and appropriate for the factual circumstances presented in this case.

2. Postbreach Evidence

The parties' next two disputes, which are related to their dispute regarding the proper methodology for calculating plaintiff's expectancy damages, concern the date(s) from which plaintiff's damages should be measured and the evidence that plaintiff is entitled to use to prove its damages. Plaintiff contends that it is entitled to two types of lost profits damages–damages that it has already incurred (past damages) and damages that it will incur (future damages)–and that its damages should be based, to the extent possible, on evidence that postdates the government's breach of contract. Defendant disagrees, arguing that all damages should be calculated from the date of breach and that postbreach information should be disregarded.

The court has already concluded that it was proper for plaintiff to measure its expectancy damages using the lost profits approach, rather than the lost asset approach espoused by defendant. When calculating profits that would be lost "on an ongoing basis over the course of the contract . . . , damages are measured throughout the course of the contract." Energy Capital Corp., 302 F.3d at 1330. Consequently, courts may consider postbreach evidence when determining lost profits. See Anchor Sav. Bank, FSB, 597 F.3d at 1369-70; Fifth Third Bank, 518 F.3d at 1377; Fishman, 807 F.2d at 551-52; Neely, 285 F.2d at 443; Restatement (Second) of Contracts, supra, § 352 cmt. b, illus. 6.

Nevertheless, defendant argues that plaintiff cannot use postbreach evidence in this case because Sonoma Village Apartments has never operated as a market-rate rental property and, thus, there is no actual evidence of the profits it lost after the government's breach of contract. In advancing this argument, defendant relies on Anchor Savings Bank, FSB, in which the plaintiff

sought damages to compensate for an entity that it was forced to sell to another financial institution as a result of the government's breach of contract. 597 F.3d at 1370. The Court of Federal Claims "concluded that the most accurate approach was to base the award of damages" on the postbreach profits realized by the entity under the ownership of the other financial institution, and the Federal Circuit affirmed that ruling. Id. Significantly, however, the Federal Circuit did not limit the use of postbreach evidence to evidence of a lost income-producing asset's actual profits as a going concern. Accordingly, the court rejects defendant's argument; plaintiff is entitled use postbreach evidence to calculate its damages. In other words, plaintiff may recover past damages based on actual financial information and market conditions from 2011 through 2016, and future damages based on its estimated 2016 data.

3. Past Damages

With respect to plaintiff's claim for past damages, the parties have a number of disputes pertaining to the estimation of damages in both the restricted and unrestricted scenarios. The court begins by addressing the parties' disagreements related to the unrestricted scenario.

a. Estimating Plaintiff's Past Income in the Unrestricted Scenario

i. Rents

The parties' first disagreement regarding the estimation of income in the unrestricted scenario concerns what rents should be used. Plaintiff contends that the appropriate rents are those that Mr. Burwell derived from the survey of actual rents prepared by Mr. Gerber. Defendant counters that the appropriate rents are those that Mr. Weinberg derived by deflating 2016 rents to what they would be in 2011 and then increasing those 2011 rents by 2.5% per year thereafter.

The court finds that plaintiff's use of the rents that Mr. Burwell derived from the survey of actual rents prepared by Mr. Gerber is fair and reasonable. The trial record reflects that both Mr. Gerber and Mr. Burwell have extensive knowledge of the Sonoma Valley and Sonoma County rental markets. In addition, Mr. Gerber's rent survey for Sonoma Valley includes data from seven properties–a not insignificant sample size. Furthermore, Mr. Burwell compared the properties in Mr. Gerber's rent survey to Sonoma Village Apartments and reasonably determined that there was no need to adjust the data supplied by Mr. Gerber to account for any differences in the properties' amenities. Finally, Mr. Burwell appropriately accounted for size-related differences between Sonoma Village Apartments and the properties surveyed by Mr. Gerber by using the average-rent-per-square-foot figures calculated by Mr. Gerber.

In contrast to the straightforward method that Mr. Burwell used to estimate rents (applying actual rents per square foot in Sonoma Valley to Sonoma Village Apartments), Mr. Weinberg employed a more complicated method and used less trustworthy data, reducing the reliability of his resulting rents. Specifically, Mr. Weinberg estimated 2016 rents for Sonoma

Village Apartments based on his own rent survey, and then, to estimate 2011 rents for Sonoma Village Apartments, deflated the 2016 rents by 35% based on Sonoma County rent data published by Real Answers. Problematically, Mr. Weinberg could not say whether the Real Answers data included properties in Sonoma Valley, and was unable to obtain–and therefore did not use–deflation rates from properties comparable to Sonoma Village Apartments. Thus, his use of a 35% deflation rate to estimate 2011 rents may not accurately remove the real estate market trends from the 2016 rents. Moreover, an inaccurate deflation rate would magnify any inaccuracies in Mr. Weinberg's 2016 estimated rents, further reducing the reliability of his estimated 2011 rents. In short, defendant's rent estimates are inferior to plaintiff's. Defendant therefore has not persuaded the court that plaintiff's rent estimates are not fair and reasonable.

ii. Nonrental Income

The parties' next dispute regarding the estimation of income in the unrestricted scenario concerns the income received by plaintiff that is not derived from rent. Both parties account for this nonrental income using a percentage of gross rental income–plaintiff uses 2.3% and defendant uses 2.7%. Notwithstanding its use of a different percentage of gross rental income to calculate plaintiff's damages, defendant has not provided any evidence that 2.3% is not a fair and reasonable percentage. Accordingly, the court finds that 2.3% of gross rental income is an appropriate approximation of nonrental income.

iii. Vacancy Rate

The parties' third disagreement regarding the estimation of income in the unrestricted scenario concerns the vacancy rate. Plaintiff proposes the use of a 3% vacancy rate that does not account for collection losses, while defendant proposes the use of a 5% vacancy rate that incorporates a 1-3% collection loss rate.

The court finds that a 3% vacancy rate is fair and reasonable. The trial record reflects that the 3% vacancy rate proposed by plaintiff was supplied by Mr. Burwell, who based the rate on historically low vacancy rates for Sonoma County (2% or less) and the probability that those rates will increase due to an increased supply of apartment units. Mr. Burwell did not account for collection losses in his vacancy rate because such losses are likely nominal, such losses are not tracked in Sonoma Valley, and there is no data upon which he could estimate such losses. Mr. Burwell, as noted above, is well-versed in the Sonoma Valley and Sonoma County markets, making his assumptions and conclusions particularly credible.

Mr. Weinberg's testimony that his vacancy rate incorporated a 2-3% rate for vacancies supports plaintiff's position. However, Mr. Weinberg also incorporated a 1-3% rate for collection losses in his vacancy rate, which was based on his survey of operating expenses for properties he deemed comparable to Sonoma Village Apartments. However, only three of these properties are located in Sonoma County, and two of those properties had a 0% collection loss rate. In other words, Mr. Weinberg's data for collection losses in Sonoma County do not

contradict Mr. Burwell's testimony. Accordingly, the court accepts Mr. Burwell's collection loss-free vacancy rate.

iv. Conversion-Related Lost Income

The parties' final dispute concerning the estimation of plaintiff's income in the unrestricted scenario relates to the conversion of Sonoma Village Apartments to a market-rate rental property. To account for the income that would be lost due to the conversion, plaintiff proposes eliminating six months of income from 2011 based on the assumption that plaintiff would have removed all of the tenants of Sonoma Village Apartments on January 3, 2011, kept the apartment units empty for six months during renovations, and then filled the apartment units with new tenants paying market rents on July 1, 2011. Defendant, in contrast, proposes a three-year conversion period during which the tenants leave Sonoma Village Apartments through normal attrition.

Plaintiff's method of accounting for the conversion of Sonoma Village Apartments to a market-rate rental property likely does not reflect what actually would have happened had the government not breached the contract. Plaintiff would have faced serious legal and/or financial consequences had it removed all of the property's tenants on January 3, 2011. Indeed, the trial record contains no evidence reflecting that plaintiff actually planned to remove all of its tenants in one fell swoop, and no evidence that plaintiff accounted for the financial consequences of such an action (for example, making incentive payments or paying for legal representation) in its damages calculations. Rather, the evidence in the trial record suggests that plaintiff assumed the removal of all of its tenants on the date of breach to avoid having to perform the more complicated–but more accurate–task of calculating conversion costs based on the actual expiration dates of the existing leases. In sum, plaintiff's approach is a simplistic way of estimating the rental income it would lose upon the conversion.

Defendant's approach is similarly simplistic. Defendant assumes that a certain number of existing tenants would have left in 2011, an additional number of existing tenants would have left in 2012, and the remaining existing tenants would have left in 2013, all on their own volition. However, this assumption is based not on the expiration dates of the existing leases, but instead on Mr. Weinberg's experience in repositioning market-rate and affordable multifamily properties. Moreover, defendant's approach is based on the assumption that plaintiff would decide to eschew a mass removal of tenants to avoid a possible public relations problem, but there is no evidence that plaintiff had, or would have acted on, any such concern.

Neither parties' approach for accounting for the conversion of Sonoma Village Apartments to a market-rate rental property likely reflects what actually would have occurred had the government not breached the contract. Plaintiff envisions a mass removal of tenants without accounting for the financial consequences of such an action, while defendant posits a three-year conversion period that is untethered to the actual remaining terms of the existing leases. Overall, however, the court finds that the evidence tips in defendant's favor for four reasons. First, to the

extent that plaintiff's approach is to be taken literally, it fails to account for the financial consequences of removing all of the tenants on the date of breach. Second, to the extent that plaintiff's approach is treated as a simplified method of estimating conversion costs, it overstates the amount of market rent and understates the amount of restricted rent that plaintiff would earn in 2011. Third, it is apparent that Dr. Ben-Zion erred by double counting plaintiff's rent loss (starting with a baseline of only six months of rent in 2011 and then subtracting an additional six months of rent in that same year), detracting from the overall reliability of his methodology. Finally, Mr. Weinberg has significant experience in repositioning multifamily properties. In short, defendant's method of accounting for the conversion using a three-year conversion period is grounded on more compelling evidence and is therefore more persuasive. Thus, the court finds that defendant's method should be used in calculating plaintiff's damages.

b. Estimating Plaintiff's Past Expenses in the Unrestricted Scenario

i. Data

With respect to plaintiff's expenses in the unrestricted scenario, the parties' first disagreement concerns the data that should be used to estimate the expenses. Plaintiff contends that its estimated expenses should be calculated using one of three sources: (1) the data provided by Ms. Williams; (2) the information that Dr. Ben-Zion downloaded from the IREM website; or (3) an expense-to-income ratio derived from the Levy appraisal (43%), Ms. Williams's data (ranging from 23.6% to 29.2% for 2012 to 2016), or the IREM information (37%). Defendant proposes using the expense-to-income ratio of 55.3% that was determined by Mr. Weinberg.

Plaintiff's preferred approach for estimating its expenses in the unrestricted scenario–the approach upon which its request for expectancy damages is based–is to use the data provided by Ms. Williams. The court found Ms. Williams to be a credible witness with an extraordinary amount of experience in managing affordable multifamily housing properties. Unfortunately, she was unable to provide satisfactory testimony regarding several expense items. For example, although Ms. Williams proposed $0 in expenditures for a management fee, Dr. Ben-Zion determined that plaintiff's estimated expenses should include a management fee. In addition, Ms. Williams stated that plaintiff would incur bookkeeping and accounting expenses, but could not testify regarding the cost of such services. And, Ms. Williams estimated the costs of taxes and insurance based on the actual expenses that plaintiff incurred, but testified that it was her belief that these expenses would change in the unrestricted scenario. These problems render Ms. Williams's data unusable because without credible amounts for all pertinent expense items, plaintiff's estimated expenses would be significantly understated.

The court need not dwell too long on plaintiff's proposed use of the information that Dr. Ben-Zion downloaded from the IREM website. That information is completely unreliable and will not be considered by the court because Dr. Ben-Zion was unable to state with any certainty what geographic area or time period the information represented.

Thus, the court is left to consider the expense-to-income ratios proposed by the parties. In light of its rejection of the estimated expenses based on Ms. Williams's data and on the information that Dr. Ben-Zion downloaded from the IREM website, the court declines to credit the expense-to-income ratios derived from those estimated expenses. Plaintiff does suggest, however, that the expense-to-income ratio set forth in the Levy appraisal would result in a fair and reasonable estimation of plaintiff's expenses. The court agrees.

The 43% expense-to-income ratio set forth in the Levy appraisal was determined by qualified appraisers at Rural Development's request; was reviewed and accepted for use by Rural Development; was calculated shortly after the government's breach of contract; was derived from projected income and expenses that were, in turn, based on data from comparable properties in Sonoma County that had recently sold; and fell within the range of ratios for the comparable properties identified by the appraisers (32% to 45%). In short, there are numerous indications that the ratio is reliable.

The 55.3% expense-to-income ratio calculated by Mr. Weinberg is not as well-supported. First, Mr. Weinberg's ratio is based on income estimates that the court has rejected. Second, Mr. Weinberg's ratio is based on expenses that he derived, in part, from examining the expenses incurred by other properties that he deemed similar to Sonoma Village Apartments; while these properties may indeed be similar to Sonoma Village Apartments on a number of variables, there are some glaring dissimilarities. For example, all of the properties are larger than Sonoma Village Apartments, with five of the eight properties being more than twice as large. And, five of the properties are located outside of Sonoma County, with three being more than 100 miles from Sonoma.[46] In other words, the data underlying Mr. Weinberg's expense-to-income ratio is not as strong as the data used in the Levy appraisal. Thus, the court finds that it is fair and reasonable to use a 43% expense-to-income ratio to estimate plaintiff's expenses in the unrestricted scenario for 2011 through 2016.[47]

ii. Loan-Related Expenses and the Mortgage Interest Rate

Because the 43% expense-to-income ratio set forth in the Levy appraisal and adopted by the court does not account for any loan-related expenses, the court must resolve an additional dispute: whether plaintiff's estimated net income should reflect plaintiff obtaining a new loan to finance the prepayment of its existing loan. Plaintiff contends that it would not have obtained a new loan to finance its loan prepayment, and therefore it did not subtract estimated mortgage

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[46] The court takes judicial notice, pursuant to Rule 201(b)(2) of the Federal Rules of Evidence, that the cities of Waterford, King City, and Gilroy are all more than 100 miles from Sonoma as the crow flies.

[47] Because the court concludes that plaintiff's expenses should be estimated using an expense-to-income ratio, there is no need to address the parties' disputes regarding individual expense items, such as maintenance payroll and real estate taxes.

payments (in other words, debt service) from its estimated net rental income. Instead, to account for the opportunity cost of prepaying the balance of its loan, it subtracted from its estimated net rental income an interest expense–an amount equal to the interest that it likely would pay on a new loan. Defendant, in contrast, assumed that plaintiff would obtain a new loan and therefore subtracted estimated mortgage payments from the net income it projected for plaintiff.

As an initial matter, the court agrees with plaintiff that estimated mortgage payments should not be subtracted from its estimated net rental income. Richard Gullotta testified that plaintiff intended, and had the financial means, to prepay the balance of its loan without obtaining a new loan, and plaintiff supported this testimony with documentary evidence. Defendant did not offer any evidence to the contrary.

Further, the court finds that it was appropriate for plaintiff to account for the opportunity cost of prepaying the balance of its loan by subtracting an interest expense from its estimated net rental income. As Dr. Ben-Zion testified, by prepaying the balance of the loan using cash, plaintiff would forgo the opportunity to invest that cash elsewhere. Because plaintiff was willing and able to prepay the balance of its loan at the time the government breached the contract, the interest expense shall be subtracted from plaintiff's estimated net rental income beginning from the date of breach.

The court also finds that it was proper for plaintiff to use mortgage interest to measure its opportunity cost. Dr. Ben-Zion testified that the interest that plaintiff would have paid had it obtained a new loan to finance the prepayment of its existing loan was the best, and most conservative, proxy for plaintiff's opportunity cost, and defendant did not challenge this proposition.

Three pieces of information are required to calculate the mortgage interest that constitutes plaintiff's interest expense: (1) the hypothetical new loan's amount, (2) the hypothetical new loan's term, and (3) the hypothetical new loan's interest rate. The evidence in the trial record reflects that the parties do not dispute that the amount of the hypothetical new loan should be the balance of plaintiff's existing loan, or that the term of the hypothetical new loan should be thirty years. Rather, the only dispute concerns the mortgage interest rate that should be used. Plaintiff proposes a 4.3% interest rate, which is based on Mr. Burwell's discussion with a local lender and falls within the range of interest rates published by Mr. Gerber. Defendant proposes a 5.5% interest rate, which is based on historical information from files in Mr. Weinberg's possession pertaining to the local market and information from a Novogradac publication. Although both parties provide support for their proposed interest rates, the quality of the supporting information differs. Plaintiff's proposed interest rate is based on a single data point, and even though the interest rate is within the range of interest rates published by Mr. Gerber, Mr. Burwell did not specify the precise range, whether 4.3% was near the top or bottom of the range, or the market of the properties connected with the range. In contrast, defendant's proposed interest rate was based on historical information regarding actual interest rates in the local market and information regarding interest rates for affordable housing. Given the superior–and thus more

compelling–evidence provided by defendant, the 5.5% interest rate proposed by defendant is more persuasive. Therefore, the court finds that a 5.5% interest rate should be used in calculating plaintiff's interest expense.

c. Estimating Plaintiff's Past Income in the Restricted Scenario

Turning to the restricted scenario for 2011 through 2016, the parties first dispute how to estimate plaintiff's net rental income. Plaintiff contends that the income that it actually received should be used to compute its past damages. Defendant contends that plaintiff's past net rental income should be computed by applying an annual 2.5% growth rate to the net rental income that plaintiff received in 2011. The court has previously concluded that it is appropriate for plaintiff to use postbreach information to more precisely calculate its damages, and found that plaintiff can estimate its rental income from 2011 through 2016 based on actual market rents for those years. In addition, plaintiff's income from 2011 through 2016 is actually known. Thus, plaintiff's use of its actual income in the restricted scenario to calculate its past damages is fair and reasonable.

d. Estimating Plaintiff's Past Expenses in the Restricted Scenario

With the exception of their dispute concerning discounting, which the court addresses below, the parties' final disagreement on past damages concerns how to estimate plaintiff's expenses in the restricted scenario. Plaintiff contends that the expenses that it actually incurred should be used to compute its past damages. Defendant contends that plaintiff's past expenses should be computed by applying an annual 2.5% growth rate to the expenses that plaintiff incurred in 2011. The court has previously concluded that it is appropriate for plaintiff to use postbreach information to more precisely calculate its damages, and notes that plaintiff's expenses for 2011 through 2016 are actually known. Thus, plaintiff's use of its actual expenses in the restricted scenario to calculate its past damages is fair and reasonable.

4. Future Damages

With respect to future damages, the parties' disputes concern the projection of income and expenses from 2017 to 2035 in both the restricted and unrestricted scenarios. The court first addresses the disputes related to the unrestricted scenario projections.

a. Projecting Plaintiff's Future Income in the Unrestricted Scenario

i. Data

The parties' first disagreement is how to project plaintiff's rental income in the unrestricted scenario. Plaintiff contends that its future rental income should be computed by applying an annual 3.5% growth rate to the 2016 rents supplied by Mr. Burwell. Defendant contends that plaintiff's future rental income should be computed by applying an annual 2.5%

growth rate to the 2014 rents supplied by Mr. Weinberg. As an initial matter, in light of its previous findings, the court concludes that the appropriate starting point for projecting plaintiff's future income is the 2016 rents supplied by Mr. Burwell. Thus, the only issue is the growth rate that should be applied to those rents.

Plaintiff's proposed 3.5% growth rate was supplied by Mr. Burwell. Mr. Burwell, in turn, based his growth rate on Mr. Gerber's finding that the market rent growth rate in Sonoma Valley for 2011 through 2015 was slightly above 5%, and his own assumption that market rents would increase at a slower rate in the future once they were "marked up to market." Mr. Burwell did not base his growth rate on inflation because of his belief that rent increases would outpace inflation due to the insufficient supply of apartment units in Sonoma Valley. Defendant's proposed 2.5% growth rate was supplied by Mr. Weinberg, who based his growth rate on data published in the Korpacz survey, his own discussions with investors, the interviews he conducted during his rent survey, and information from Novogradac's database. From these facts, it is apparent that Mr. Burwell's growth rate was based exclusively on actual data from Sonoma Valley and his experience in the Sonoma Valley market. In contrast, while some of the data that Mr. Weinberg used to determine his growth rate appears to be market-specific (for example, the data gleaned from his rent survey interviews), Mr. Weinberg did not describe the data with the specificity necessary to ascertain its applicability to the Sonoma Valley market. Accordingly, the court finds that the 3.5% growth rate proposed by plaintiff is fair and reasonable.

ii. Nonrental Income and Vacancy Rate

The parties' other disagreements regarding the projection of income in the unrestricted scenario concern the income received by plaintiff that is not derived from rent and the vacancy rate. The court previously found, when addressing plaintiff's claim for past damages, that 2.3% of gross rental income is a fair and reasonable approximation of nonrental income, and that 3% is a fair and reasonable vacancy rate. These findings also apply to plaintiff's claim for future damages.

b. Projecting Plaintiff's Future Expenses in the Unrestricted Scenario

Similarly, the parties' disputes regarding the projection of plaintiff's future expenses in the unrestricted scenario mirror their expenses-related disputes with respect to plaintiff's claim for past damages. Thus, in projecting plaintiff's future expenses, the court finds it fair and reasonable to use a 43% expense-to-income ratio to calculate plaintiff's non-loan-related expenses and a 5.5% mortgage interest rate to calculate plaintiff's interest expense.[48]

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[48] Because plaintiff's projected expenses will be calculated as a percentage of plaintiff's projected income, the court need not resolve the parties' dispute concerning the appropriate growth rate to apply to plaintiff's future expenses. Plaintiff's projected expenses will grow at the same rate as plaintiff's projected income.

c. Projecting Plaintiff's Future Income in the Restricted Scenario

Turning to the restricted scenario for 2017 through 2035, the parties first dispute how to project plaintiff's net rental income. Plaintiff contends that its future net rental income should be computed by applying an annual 2% growth rate to the net rental income that it received in 2016. Defendant contends that plaintiff's future net rental income should be computed by applying an annual 2.5% growth rate to the net rental income that plaintiff received in 2011. The court previously found that plaintiff is entitled to use actual data for the 2011 to 2016 time period in its damages calculations. Thus, the only issue is the appropriate growth rate to be applied to plaintiff's 2016 net rental income.

Plaintiff's proposed growth rate was supplied by Dr. Ben-Zion, who based his rate on the fact that rents at Sonoma Village Apartments increased by 2% annually from 2005 through 2015, and the fact that the Congressional Budget Office projects that inflation will be approximately 2% for the next fifteen years. Defendant's proposed growth rate was supplied by Mr. Weinberg, who indicated that his growth rate was "somewhat budget based . . . ." Tr. 1024 (Weinberg). Because the growth rate proposed by plaintiff was actually–and not somewhat–based on plaintiff's budget, the court finds the use of a 2% growth rate to be fair and reasonable.

d. Projecting Plaintiff's Future Expenses in the Restricted Scenario

The parties' next dispute is how to project plaintiff's expenses in the restricted scenario. Plaintiff apparently proposes computing its future expenses by applying an annual 2% growth rate to the expenses it incurred in 2016. Defendant contends that plaintiff's future expenses should be computed by applying an annual 2.5% growth rate to the expenses that plaintiff incurred in 2011. The court previously found that plaintiff is entitled to use actual data for the 2011 to 2016 time period in its damages calculations. Thus, the only issue is the appropriate growth rate to be applied to plaintiff's 2016 expenses.

Although the trial record lacks any direct evidence indicating that plaintiff is proposing a 2% growth rate, the court finds that a different growth rate would be inappropriate because it would make no sense to set a growth rate for expenses that outpaces the 2% growth rate for income that the court has already found to be fair and reasonable. Indeed, defendant proposes that future income and expenses in the restricted scenario increase at the same 2.5% rate. Accordingly, the court finds it fair and reasonable to apply an annual 2% growth rate to project plaintiff's future expenses.

e. Calculating Projected Net Income in the Restricted Scenario

The final non-discounting-related issue implicated by the parties' positions on plaintiff's projected income in the restricted scenario is how, precisely, plaintiff's future net income should be calculated. Although calculating net income normally requires subtracting expenses from income, defendant asserts that the calculation is not so simple when projecting plaintiff's future

net income in the restricted scenario due to the distribution limitation imposed by United States Department of Agriculture regulations. The distribution limitation, defendant contends, would result in plaintiff's net income being capped at $5310 per year through 2035. Unfortunately, there is no evidence in the trial record that indicates whether plaintiff took the distribution limitation into account when projecting future net income in the restricted scenario.

The court finds that notwithstanding its previous findings with respect to the growth rates that should be used to project plaintiff's income and expenses in the restricted scenario, the distribution limitation would affect plaintiff's future net income. Accordingly, to the extent that plaintiff's future net income is projected to exceed $5310 in a particular year, plaintiff's projected income for that year should be capped at $5310.

5. Discounting Plaintiff's Damages

The parties' final dispute concerns the appropriate prejudgment and postjudgment discount rates.[49] As an initial matter, the court concludes, following Franconia Associates, that "the risk portion of the discount rate applied to post-judgment lost profits" should be applied to postbreach, prejudgment lost profits. 61 Fed. Cl. at 766. Thus, the court first addresses the postjudgment discount rate.

a. Postjudgment Discount Rate

Plaintiff proposes applying a 7% property discount rate to its future damages, and apparently applied that discount rate to its projected future income in both the restricted and unrestricted scenarios. Defendant proposes using an 8.75% equity discount rate in the unrestricted scenario and a 10.5% equity discount rate in the restricted scenario.

The first issue implicated by the parties' proposals is whether the cash flows in the restricted scenario should be discounted at a different rate than the cash flows in the unrestricted scenario. Because the risks associated with operating a section 515 property differ from those associated with operating a market-rate rental property, the court finds that it is appropriate to use different discount rates in each scenario. Accord id. at 764-66.

Related to the first issue is the question of whether the discount rate to be applied in the restricted scenario should account for the government-imposed limitation on distributions. The court previously found that plaintiff's future net income in the restricted scenario should account

[49] For the purposes of calculating damages, both parties assumed a judgment date of December 31, 2016, which coincides with the date that divides plaintiff's past damages from plaintiff's future damages. Consequently, plaintiff refers to discounting past and future damages. However, because the judgment date will not coincide with the date that divides plaintiff's past damages from plaintiff's future damages, the court refers to discounting prejudgment and postjudgment damages.

for the distribution limitation. Therefore, the discount rate for the restricted scenario should also account for the distribution limitation.

The third issue implicated by the parties' proposals is whether it is more appropriate to use a property discount rate–as plaintiff proposes–or an equity discount rate–as defendant proposes. The court has previously found that estimated mortgage payments should not be subtracted from plaintiff's projected net income in the unrestricted scenario because plaintiff would not have obtained a new loan to finance the prepayment of its existing loan. In other words, the court found that there would be no debt associated with Sonoma Village Apartments in the unrestricted scenario. Consequently, the appropriate discount rate to use in that scenario–as explained by Mr. Weinberg–is a property discount rate. Because plaintiff is the only party that proposed a property discount rate, and because plaintiff provided sufficient evidence of the appropriate property discount rate (Mr. Burwell's testimony, which was based on his knowledge of the Sonoma Valley market and the data that he obtained from Mr. Gerber), the court finds that use of a 7% property discount rate for the unrestricted scenario is fair and reasonable.

Finally, with respect to the discount rate that should be used in the restricted scenario, the court notes that defendant is the only party that accounted for the different risks inherent in the restricted and unrestricted scenarios, and the only party that accounted for the government-imposed distribution limitation. Thus, the court adopts defendant's formula for calculating the appropriate discount rate: discount rate = 8% distribution limitation + growth rate. Because the court has previously found plaintiff's 2% growth rate in the restricted scenario to be fair and reasonable, the court finds that the fair and reasonable discount rate for the restricted scenario is 10%.

b. Prejudgment Discount Rate

Having determined the appropriate postjudgment discount rates, the court can turn to the issue of prejudgment discounting. Although plaintiff argues that its past lost profits should not be discounted at all, an argument already rejected by the court, plaintiff also contends that if its past lost profits must be discounted, they should be discounted by a rate that only reflects risk and uncertainty–either 1%, a rate suggested by Dr. Ben-Zion, or 1.56%, a rate that plaintiff offered in its posttrial reply brief as being derived from Mr. Weinberg's testimony. Defendant contends that the net income in the unrestricted scenario should be discounted using an 8.75% discount rate and the net income in the restricted scenario should be discounted using a 4.12% "safe" discount rate.

Because the prejudgment discount rates should reflect only the risk component of the postjudgment discount rates, and because neither party proposed such a rate, the court rejects both parties' proposals. The court previously concluded that the postjudgment discount rate that should be used in the unrestricted scenario is 7%, which is composed of a capitalization rate of approximately 5.5% and a growth rate of "a little less than 2%." There is no evidence in the trial record reflecting how much of the 5.5% capitalization rate represents risk. Because plaintiff bore

the burden of establishing how much risk was reflected in its capitalization rate, and failed to meet that burden, the court finds that the fair and reasonable prejudgment discount rate for the unrestricted scenario is 5.5%. In addition, the court previously concluded that the postjudgment discount rate that should be used in the restricted scenario is 10%, which is based on the equation proposed by defendant and composed of the 8% distribution limitation and a 2% growth rate. The trial record contains no evidence regarding what portion, if any, of the 8% distribution limitation reflects risk. Because the burden of persuasion shifted to defendant to establish how much of the 8% distribution limitation accounts for risk (since defendant was the party who proposed using 8% as a component of the discount rate that should be applied in the restricted scenario), and defendant failed to meet that burden, the court finds that the fair and reasonable prejudgment discount rate for the restricted scenario is 0%.

6. Conclusion

As reflected by the above analysis, and as permitted by binding precedent, the court did not accept either party's damages calculations in their entirety. See Precision Pine & Timber, Inc. v. United States, 596 F.3d 817, 833 (Fed. Cir. 2010) ("As the fact finder in the bench trial, the judge is responsible for deciding what evidence to credit or reject and what result to reach. Just as a jury may find for a party without believing everything that party's witnesses say, a judge may award damages, even if he does not fully credit that party's methodology."). Rather, the court has accepted elements of plaintiff's approach and elements of defendant's approach in determining the expectancy damages to which plaintiff is entitled. Consequently, the parties must recalculate plaintiff's expectancy damages to conform with the court's findings and conclusions.

V. TAX NEUTRALIZATION PAYMENT

In addition to its expectancy damages, plaintiff seeks a tax neutralization payment of approximately $2,136,681, representing compensation for the increased amount of federal and state income taxes that it alleges its partners would owe due to plaintiff receiving a lump-sum damages award in lieu of a twenty-four-year-long stream of market-rate rental income.[50] In other words, plaintiff seeks to "gross up" its damages award to offset its partners' purported increased tax burden. In its August 24, 2016 Opinion and Order, the court held that plaintiff could present evidence in support of this claim.[51] Sonoma Apartment Assocs., 127 Fed. Cl. at 721.

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[50] The precise amount of the tax neutralization payment depends on the amount of expectancy damages awarded by the court.

[51] The court incorporates in this decision the analysis of relevant precedent set forth in its August 24, 2016 Opinion and Order.

A. Legal Standard

As with a claim for lost profits or any other damages claim, a plaintiff in a breach-of-contract suit seeking to gross up a lump-sum damages award to account for an increased tax burden must prove, by a preponderance of the evidence, foreseeability, causation, and reasonable certainty.[52] Ind. Mich. Power Co. v. United States, 422 F.3d 1369, 1373 (Fed. Cir. 2005); Energy Capital Corp., 302 F.3d at 1325-26. As noted above, with respect to the "reasonably certainty" element, "[i]f a reasonable probability of damage can be clearly established, uncertainty as to the amount will not preclude recovery." Locke, 283 F.2d at 524. Indeed, "it is not essential that the amount of damages be ascertainable with absolute exactness or mathematical precision. It is enough if the evidence adduced is sufficient to enable a court . . . to make a fair and reasonable approximation." Specialty Assembling & Packing Co., 355 F.2d at 572 (citations omitted); see also San Carlos Irr. & Drainage Dist. v. United States, 111 F.3d 1557, 1563 (Fed. Cir. 1997) ("[C]ontract law precludes recovery for speculative damages."). This rule applies with equal force to damages awards that compensate for adverse tax consequences. See Bank of Am., FSB v. Doumani, 495 F.3d 1366, 1374 (Fed. Cir. 2007) (affirming the decision of the Court of Federal Claims not to gross up the damages award due, in part, to the fact that the plaintiff's tax rate was "highly variable"); Home Sav. of Am. v. United States, 399 F.3d 1341, 1355-56 (Fed. Cir. 2005) (affirming a tax gross-up award over the government's objections that (1) the plaintiff could avoid paying income taxes using "tax planning resources" and (2) "future tax rates are unknown"); Medcom Holding Co. v. Baxter Travenol Labs., Inc., 106 F.3d 1388, 1404 (7th Cir. 1997) ("We give great deference to the district court in exercising its equitable discretion. The district court concluded that compensating for tax effects was inappropriate and speculative. . . . We cannot say that the district court abused its discretion in refusing to increase the damage award to reflect potential tax effects."); Paris v. Remington Rand, Inc., 101 F.2d 64, 68 (2d Cir. 1939) ("To calculate such an item of damages permits of wide speculation. If such damages are awarded, the amount of tax differential will depend on the method by which [the plaintiff] has kept his books–cash or accrual basis. Damages would vary in each instance. Another consideration would be the taxpayer's financial position and other earnings of the year which would enter into the calculations so that it would be highly speculative to find the amount of the damages due to [the defendant's] breach of contract."); Anchor Sav. Bank, FSB v. United States, 123 Fed. Cl. 180, 185 (2015) (rejecting the suggestion that a tax gross-up payment was improper due to the "numerous variables and ambiguities inherent in assessing [the plaintiff's] future tax liability" because such payments are "based on a projection of plaintiff's tax liability, which

[52] Defendant does not dispute that plaintiff has established the foreseeability and causation elements of its tax neutralization claim. Indeed, the receipt of lump-sum damages awards in breach-of-contract cases will very likely have tax consequences for the recipients; in such cases, the tax consequences are both foreseeable results of the breach of contract and proximately caused by the breach of contract. Therefore, plaintiff has met its burden of proof on these elements. Thus, the only issue before the court is whether plaintiff has established the existence of a sufficient basis for determining a tax neutralization payment with reasonable certainty.

inevitably entails a certain degree of uncertainty" and because "[t]he Federal Circuit does not require 'absolute exactness or mathematical precision.'" (quoting Bluebonnet Sav. Bank, F.S.B., 266 F.3d at 1355)).

In a breach-of-contract case, "proof of damages to a reasonable certainty" is an issue of fact, Fifth Third Bank, 518 F.3d at 1375, as is "whether [a damages] model is or is not too speculative to be reliable," Dairyland Power Coop. v. United States, 645 F.3d 1363, 1371 (Fed. Cir. 2011). Further, as with its determination of expectancy damages, the court, in determining the amount of a tax neutralization payment, "may act upon probable and inferential as well as direct and positive proof." Locke, 283 F.2d at 524.

B. The Parties' Experts

In support of its claim for a tax neutralization payment, plaintiff again presented the testimony of Dr. Ben-Zion. In addition to the credentials noted above, Dr. Ben-Zion is the author of one of the leading articles on the topic of tax neutralization in which he sought to demonstrate that when an individual is compensated for a lost stream of future income with a lump sum payment, the adverse tax consequences of the lump sum payment should be mitigated by a tax neutralization payment. Tr. 398-400 (Ben-Zion); see also PX 1 (citing Barry Ben-Zion, Neutralizing the Adverse Tax Consequences of a Lump-Sum Award in Employment Cases, 13 J. Forensic Econ. 233 (2000)[53]). He has testified on the topic of tax neutralization in wage and employment cases between forty and fifty times. See Tr. 404-05 (Ben-Zion); see also id. at 649 (indicating that Dr. Ben-Zion has testified in approximately 150 cases arising under the Employers' Liability Act, 45 U.S.C. §§ 51-60 (2012), and in thirty to forty maritime cases). In most of those cases, Dr. Ben-Zion based his damages calculations on five years of lost income because the plaintiffs were expected to mitigate their damages within five years, id. at 769; see also id. at 650 (indicating two instances in which Dr. Ben-Zion projected income for several decades into the future), and discounted future lost income by 1%, which is the "real differential between the interest rate and the wage growth rate," id. at 770; accord id. at 658. In contrast, Dr. Ben-Zion has not testified on the topic of tax neutralization in any nonemployment cases. Id. at 411. But see id. at 771 (reflecting that Dr. Ben-Zion has performed a tax neutralization calculation in a "commercial damage case, but not a real estate commercial damage case"). Further, Dr. Ben-Zion is not a CPA or a licensed tax preparer, has not studied or taught federal taxation, and has not prepared any income tax returns for the last ten years. Id. at 409-10. Dr. Ben-Zion was asked, as part of his estimation of plaintiff's economic damages, to determine the tax consequences of plaintiff receiving a lump-sum damages award for its lost profits rather than the future stream of income that would have resulted absent the government's breach of contract. Id. at 556.

[53] Defendant submitted this article as an exhibit to its pretrial motion in limine, but the article is not part of the trial record.

To rebut Dr. Ben-Zion's testimony, defendant offered the testimony of Mr. Krabbenschmidt. Mr. Krabbenschmidt is a CPA, and has been a partner at Novogradac since 1992. Id. at 1163 (Krabbenschmidt); DX 2. He estimates that during his professional career, "at least half of [his] activity . . . is doing tax work for" individuals, partnerships, and corporations. Tr. 1166 (Krabbenschmidt); see also id. at 1176 (indicating that Mr. Krabbenschmidt has prepared "thousands of tax returns" during his "thirty-seven years of experience"). Mr. Krabbenschmidt has written a handbook and taught classes on the tax credit available to investors willing to invest capital in low-income housing. Id. at 1166-68. He has also taught classes on renewable energy tax credits and tax credits in general. Id. at 1169. Mr. Krabbenschmidt is the general partner for three multifamily apartment complexes and has helped develop at least two low-income housing properties. Id. at 1170. He has provided expert testimony at trial on numerous prior occasions regarding tax credits, the rights and responsibilities under partnership agreements, debt conversions, and general accounting for multifamily housing, id. at 1171-73, but has never testified in court regarding tax neutralization damages, id. at 1294. In both his practice and his expert testimony, Mr. Krabbenschmidt has performed tax gross-up calculations, id. at 1171-73, but he has never performed forensic accounting for tax gross-up damages, id. at 1295. Mr. Krabbenschmidt was asked to review Dr. Ben-Zion's report and identify and address any calculation or theoretical issues. Id. at 1174.

C. Plaintiff's Position

To determine the tax neutralization payment to which he believes plaintiff is entitled, Dr. Ben-Zion calculated what the tax consequences would have been for all but one of plaintiff's partners had Sonoma Village Apartments been converted to a market-rate rental property in 2011, calculated the tax consequences of the lump-sum damages award for each of those partners, and then calculated the difference between the two scenarios.[54] Tr. 559-61 (Ben-Zion). Each of these steps is described in more detail below.

1. The Tax Consequences of Converting Sonoma Village Apartments to a Market-Rate Rental Property

Dr. Ben-Zion began his tax neutralization analysis by determining what the tax consequences for each of the partners would have been had Sonoma Village Apartments been converted to a market-rate rental property in 2011. Id. at 559. To make this determination, he

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[54] Plaintiff presented evidence regarding the increased tax burden that would be faced by Richard Gullotta, Mark Gullotta, Eric Gullotta, and Karen Kass, but did not present any evidence that Mr. Parasol would face an increased tax burden. See Tr. 558-59 (Ben-Zion). Indeed, plaintiff is not seeking compensation for any adverse tax consequences suffered by Mr. Parasol. Thus, unless otherwise specified, the court's use of "the partners" or "each partner" in conjunction with plaintiff's claim for a tax neutralization payment refers to all of the partners except Mr. Parasol.

needed to compute each partner's tax liability assuming that a conversion had occurred ("conversion scenario"), compute each partner's tax liability assuming the status quo ("status quo scenario"), and then calculate each partner's net tax liability by subtracting the latter from the former.[55] Id. at 596, 598.

a. Computing Tax Liability Assuming a Conversion

The starting point for Dr. Ben-Zion's analysis was to compute each partner's tax liability in the conversion scenario. As his initial step, Dr. Ben-Zion determined each partner's adjusted gross income for 2011 through 2035. Tr. 559-60 (Ben-Zion). For 2011 through either 2014 (Eric Gullotta) or 2015 (Richard Gullotta, Mark Gullotta, and Karen Kass), Dr. Ben-Zion used the adjusted gross income from each partner's federal income tax returns. Id. at 559, 579, 798-99, 807; see also id. at 659-60 (reflecting that Dr. Ben-Zion assumed the accuracy of the adjusted gross income amounts reported on the partners' tax returns because the partnership income was based on audited financial statements, and the Internal Revenue Service has never challenged the partners' tax returns).

For 2016 through 2035, Dr. Ben-Zion projected each partner's adjusted gross income by assuming that the partners would have the same income that they had in either 2014 (Eric Gullotta) or 2015 (Richard Gullotta, Mark Gullotta, and Karen Kass). Id. at 580-81, 612, 786, 801; see also id. at 651 ("[W]e don't have a way of knowing what the future income of the partners will be."). One consequence of this assumption is that the income projections would not reflect any passive activity losses of which the partners might take advantage. Id. at 782; cf. id. at 137-38 (Gullotta) (reflecting that Richard Gullotta anticipated carrying forward passive activity losses for the indefinite future). However, Dr. Ben-Zion opined that the existence of passive activity losses had no effect on his calculations because they would almost equally affect both the income that plaintiff would have earned but for the government's breach of contract and the income that will result from the lump-sum damages award. Id. at 640-43, 783, 1354, 1356 (Ben-Zion); see also id. at 1303 (Krabbenschmidt) ("The passive loss rules apply regardless of when that income [from passive activities] is received . . . .").

Another consequence of Dr. Ben-Zion's assumption that the partners' incomes would remain flat after 2015 is that Dr. Ben-Zion probably overestimated Richard Gullotta's future tax liability due to the unlikelihood that Richard Gullotta, currently in his early seventies, would continue work full-time through 2035. Id. at 580-81 (Ben-Zion); see also id. at 89 (Gullotta) (indicating that Richard Gullotta was seventy-two years old at the time of trial and would turn

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[55] Dr. Ben-Zion's tax neutralization analysis for Richard Gullotta is reflected in plaintiff's exhibits 17 through 21. See generally Tr. 587-98, 608-25 (Ben-Zion). His tax neutralization analysis for Eric Gullotta is reflected in plaintiff's exhibits 22 through 26. See generally id. at 625-30. His tax neutralization analysis for Karen Kass is reflected in plaintiff's exhibits 27 through 31. See generally id. at 631-32. And, his tax neutralization analysis for Mark Gullotta is reflected in plaintiff's exhibits 32 through 36. See generally id. at 632-34.

ninety-two years old in 2035), 1230-32 (Krabbenschmidt) (indicating that according to the mortality tables published by the Social Security Administration, Richard Gullotta had a life expectancy of thirteen years). However, Dr. Ben-Zion stated that overestimating Richard Gullotta's future tax liability results in a more conservative estimate of the adverse tax consequences. Id. at 580-81 (Ben-Zion); accord id. at 651-52; see also id. at 652, 821 (explaining that the overstatement of Richard Gullotta's future tax liability was greater than the understatement of the Gullotta children's future tax liabilities).

A third consequence of the flat-income assumption is that it does not account for the expected changes in all of the partners' earning potential. See, e.g., id. at 791-94 (reflecting that Dr. Ben-Zion would not change his assumption of static income if Eric Gullotta expected to earn more income than he currently earns sooner rather than later), 804-05 (reflecting that Dr. Ben-Zion would not change his assumption of static income if Eric Gullotta expected his business expenses to decrease, leading to an increase in income), 808-14 (reflecting Dr. Ben-Zion's lack of knowledge regarding whether the income of Karen Kass's husband would increase if he became a CPA, and his agreement that if Karen Kass was not presently working, her income would increase if she reentered the workforce). Dr. Ben-Zion explained that there would be no way to predict how and when the partners' incomes might change. Id. at 820; accord id. at 1203, 1233, 1307, 1335 (Krabbenschmidt) (remarking that it is not worth projecting taxable income beyond three years in the future); cf. id. at 786-806 (Ben-Zion) (reflecting that Dr. Ben-Zion did not investigate the amounts set forth on the first page of each partner's federal income tax returns).

Once he projected the partners' adjusted gross incomes, Dr. Ben-Zion added to each of those amounts the share of the projected net income that would have been allocated to the partner by the partnership in the conversion scenario, id. at 560, 572-73, 594, 610-11, after adjusting for depreciation, id. at 588, 594, 610, 612.[56]

Then, Dr. Ben-Zion subtracted the standard deduction from the partners' projected annual incomes (adjusted gross incomes plus conversion-scenario partnership incomes) to project the

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[56] Dr. Ben-Zion's net income amounts were based on Mr. Gerber's, and not Mr. Burwell's, rents. See Tr. 423 (Ben-Zion) ("I used the Gerber numbers as the projected rents."); see also id. at 587 (reflecting Dr. Ben-Zion's acknowledgment that his tax neutralization calculations were not "revised"). In addition, Dr. Ben-Zion performed two net income calculations, one in which he assumed that Ms. Williams's projected expenses were used to determine lost profits, and another in which he assumed that the information he downloaded from the IREM website was used to determine lost profits. Id. at 561, 587, 595-96, 598. Because the court has found that plaintiff's lost profits should be based on different rents and expenses, see supra Section IV.D, plaintiff would need to amend the net income amounts used by Dr. Ben-Zion in his tax neutralization calculations if the court concludes that plaintiff is entitled to a tax neutralization payment.

partners' taxable incomes.[57] Id. at 573, 589; see also id. at 774 (indicating that Dr. Ben-Zion did not use any information from the partners' federal income tax returns beyond the first two pages because he assumed the use of the standard deduction). He used the standard deduction, rather than the partners' itemized deductions, for three related reasons. Id. at 561-65. His first reason was that using the standard deduction simplifies the calculation. Id. at 562, 564, 573. His second reason was that because use of the standard deduction increases taxable income and, therefore, income tax liability, its use results in a more conservative estimate of adverse tax consequences. Id. at 562, 573-74; accord id. at 649. His third reason was that the partners might not be able to benefit from itemizing their deductions in the year of the lump-sum damages award because, as a result of the increase in income from that award, they might be subject to the alternative minimum tax, which is calculated without the benefit of certain otherwise-allowable deductions.[58] Id. at 563-64, 581-82, 584-85; see also id. at 564-65, 584-86, 645-46, 818 (contending that taxpayers subject to the alternative minimum tax cannot take advantage of the state income tax deduction); cf. id. at 581 (reflecting that Richard Gullotta is already subject to the alternative minimum tax). According to Dr. Ben-Zion, use of the standard deduction is "a common methodology." Id. at 578.

After calculating each partner's annual taxable incomes, Dr. Ben-Zion projected the partners' annual tax liabilities. Id. at 560. For 2011 through 2015, he used the actual federal and state income tax rates. See id. at 589. For 2016 through 2035, he projected the partners' tax liabilities using two assumptions, both of which he considers to be "common." Id. at 578; accord id. at 649-50 (reflecting Dr. Ben-Zion's assertion that a court has never rejected his assumption of constant tax rates, even when projecting income many decades into the future). His first assumption was that income tax brackets would remain constant from 2015 through 2035, id. at 576-78, even though the government annually adjusts the brackets to keep pace with inflation, id. at 575-77. Dr. Ben-Zion stated that the elimination of this "bracket creep" from his tax liability calculation results in an overstatement of the partners' tax liabilities and, therefore, a more conservative estimate of the adverse tax consequences. Id. at 577; accord id. at 567, 574. Dr. Ben-Zion's second assumption, which he labels "conservative," was that the income tax rates would remain constant from 2015 through 2035 "because nobody can predict how Congress might change the tax structure." Id. at 578; accord id. at 648-49, 651. Dr. Ben-Zion averred that

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[57] Although Dr. Ben-Zion testified, unchallenged, that he subtracted the standard deduction from each partner's annual incomes to determine their taxable incomes, Tr. 573, 589 (Ben-Zion), the spreadsheets showing Dr. Ben-Zion's calculations do not clearly reflect the subtractions, see PX 17; PX 22; PX 27; PX 32.

[58] Congress created the alternative minimum tax to ensure the payment of federal income taxes by wealthy individuals who used deductions to avoid the payment of such taxes. Tr. 1221-22 (Krabbenschmidt). When calculating the alternative minimum tax, a taxpayer cannot take advantage of certain deductions, such as state income taxes, property taxes, and charitable contributions. Id. at 1222-23.

this assumption results in the overstatement of the partners' tax liabilities and, therefore, the understatement of the tax consequences faced by the partners. Id. at 648-49.

Next, Dr. Ben-Zion discounted the partners' projected tax liabilities for 2017 through 2035 to their present value. Id. at 560, 592. He used the same 7% discount rate that he used to discount plaintiff's projected future net income because "[t]he taxes depend on that income." Id. at 592; accord id. at 653, 656; see also id. at 656-57 ("The tax depends on the income. So if there is uncertainty about the income, the same uncertainty should apply to the tax on that income and, therefore, it should be appropriate to discount the [tax] in the same proportion that we discounted . . . the [income]."), 771 (explaining that if he discounted the future taxes at 1% while the projected future net income remained discounted at 7%, there would be no need for a tax neutralization payment).

Finally, Dr. Ben-Zion added each partner's estimated tax liabilities for 2011 through 2016 to the present value of his or her projected tax liabilities for 2017 through 2035 to arrive at the partners' total estimated tax liabilities in the conversion scenario. Id. at 596.

b. Computing Tax Liability Assuming the Status Quo

Once he estimated each partner's tax liability in the conversion scenario, Dr. Ben-Zion needed to estimate the partners' tax liabilities in the status quo scenario.[59] Id. at 596. To do so, he first determined each partner's adjusted gross income for 2011 through 2035. Id. at 591. For 2011 through either 2014 (Eric Gullotta) or 2015 (Richard Gullotta, Mark Gullotta, and Karen Kass), Dr. Ben-Zion used the adjusted gross income from the partners' federal income tax returns. PX 19; PX 24; PX 29; PX 34.[60] For 2016 to 2035, he projected each partner's adjusted

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[59] Dr. Ben-Zion's process for projecting the partners' tax liabilities in the status quo scenario mirrors the process he used for projecting the partners' tax liabilities in the conversion scenario. Compare PX 17, and PX 22, and PX 27, and PX 32 (showing Dr. Ben-Zion's calculations for the conversion scenario), with PX 19, and PX 24, and PX 29, and PX 34 (showing Dr. Ben-Zion's calculations for the status quo scenario). Thus, the consequences and criticisms of the process used in the latter scenario also apply to the former scenario.

[60] These four exhibits contain spreadsheets showing Dr. Ben-Zion's calculations. The court compared the annual incomes on the spreadsheets to the adjusted gross incomes reported on the partners' tax returns. See JX 52 at 1; JX 53 at 1; JX 54 at 1; JX 55 at 1; JX 58 at 1; JX 59 at 1; JX 60 at 1; JX 61 at 1; JX 63 at 1; JX 64 at 1; JX 65 at 1; JX 66 at 1; JX 67 at 1; JX 68 at 1; JX 69 at 1; JX 70 at 1; JX 71 at 1; JX 72 at 1; JX 81 at 2. The annual incomes used by Dr. Ben-Zion matched the partners' annual adjusted gross incomes.

gross income by assuming that the partners would have the same income that they had in either 2014 (Eric Gullotta) or 2015 (Richard Gullotta, Mark Gullotta, and Karen Kass). PX 19; PX 24; PX 29; PX 34.[61]

Next, Dr. Ben-Zion added to the partners' adjusted gross incomes the share of the projected net income that each partner would receive from the partnership in the status quo scenario, PX 19; PX 24; PX 29; PX 34, after adjusting for depreciation, PX 19; PX 24; PX 29; PX 34; Tr. 597 (Ben-Zion); see also Tr. 597 (Ben-Zion) (explaining that because the permitted depreciation is greater than the net income, a loss is generated for all future years). Then, presumably, Dr. Ben-Zion subtracted the standard deduction from the partners' projected annual incomes (adjusted gross incomes plus status-quo-scenario partnership incomes) to project their taxable incomes.[62]

After calculating each partner's annual taxable incomes, Dr. Ben-Zion projected the partners' annual tax liabilities. PX 19; PX 24; PX 29; PX 34. It appears that for 2011 through 2015, he used the actual federal and state income tax rates.[63] And, it appears that for 2016 through 2035, he projected the partners' tax liabilities using the assumptions that the income tax brackets and income tax rates would remain constant at 2015 levels.[64]

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[61] These four exhibits contain spreadsheets showing Dr. Ben-Zion's calculations. The court compared the annual incomes on the spreadsheets for either 2014 or 2015 to the adjusted gross incomes reported on the partners' tax returns for the relevant year. See JX 55 at 1; JX 67 at 1; JX 72 at 1; JX 81 at 2. The annual incomes used by Dr. Ben-Zion matched the partners' annual adjusted gross incomes.

[62] Although Dr. Ben-Zion testified, unchallenged, that he subtracted the standard deduction from each partner's projected annual incomes to determine their projected taxable incomes in the conversion scenario, Tr. 573, 589 (Ben-Zion), he did not so testify regarding the status quo scenario. However, because Dr. Ben-Zion's process for projecting the partners' tax liabilities in the status quo scenario mirrors the process he used for projecting the partners' tax liabilities in the conversion scenario, see supra note 59, the court finds it likely that he subtracted the standard deduction in both scenarios.

[63] Although Dr. Ben-Zion testified that he used the actual federal and state income tax rates for 2011 through 2015 to determine the partners' annual tax liabilities in the conversion scenario, Tr. 589 (Ben-Zion), he did not so testify regarding the status quo scenario. However, because Dr. Ben-Zion's process for projecting the partners' tax liabilities in the status quo scenario mirrors the process he used for projecting the partners' tax liabilities in the conversion scenario, see supra note 59, the court finds it likely that he used the actual federal and state income tax rates for 2011 through 2015 in both scenarios.

[64] Although Dr. Ben-Zion testified that he used the actual federal and state income tax rates for 2015 to project the partners' future annual tax liabilities in the conversion scenario, Tr. 578 (Ben-Zion), he did not so testify regarding the status quo scenario. However, because Dr.

Then, Dr. Ben-Zion discounted the partners' projected tax liabilities for 2017 through 2035 to their present value using a 7% discount rate. PX 19; PX 24; PX 29; PX 34.

Finally, Dr. Ben-Zion added each partner's estimated tax liabilities for 2011 through 2016 to the present value of his or her projected tax liabilities for 2017 through 2035 to arrive at the partners' total estimated tax liabilities in the status quo scenario. PX 19; PX 24; PX 29; PX 34.

c. Calculating Net Tax Liability

The final step in Dr. Ben-Zion's determination of the tax consequences for each partner if plaintiff had been allowed to begin charging market rents in 2011 was to subtract each partner's estimated tax liability in the status quo scenario from his or her estimated tax liability in the conversion scenario to determine the partners' net tax liabilities. Tr. 598, 623-24 (Ben-Zion).

2. The Tax Consequences of the Lump-Sum Damages Award

In the second stage of his tax neutralization analysis, Dr. Ben-Zion determined the effect that the lump-sum damages award would have on each partner's income tax liability in the presumed year of payment, 2017.[65] Id. at 560-61. He did so by adding each partner's share of the lump-sum damages award to the partner's projected income for 2017.[66] Id. at 614, 623. From that total, he subtracted an amount for depreciation to arrive at the partners' taxable incomes. Id. He did not subtract any amounts to account for "the possibility that [plaintiff] could have . . . tak[en] some money and invest[ed] in capital improvements that [the partners could] write off as an expense to reduce their tax on the lump sum," because such capital

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Ben-Zion's process for projecting the partners' tax liabilities in the status quo scenario mirrors the process he used for projecting the partners' tax liabilities in the conversion scenario, see supra note 59, the court finds it likely that he used the actual 2015 federal and state income tax rates in both scenarios.

[65] Although Dr. Ben-Zion does not testify to the precise year that he presumed payment, a comparison of the exhibits that he prepared reflecting his tax neutralization analysis for Richard Gullotta indicates that he presumed payment in 2017. Compare PX 19 (indicating that Richard Gullotta's projected taxable income for 2017 is $406,276), with PX 20 (reflecting that Dr. Ben-Zion added Richard Gullotta's share of the lump-sum damages award to taxable income of $406,276).

[66] The lump-sum damages award used by Dr. Ben-Zion in his tax neutralization analysis is based, in part, on amounts and discount rates rejected by the court. Accordingly, if the court concludes that plaintiff is entitled to a tax neutralization payment, plaintiff would need to recalculate the tax consequences of the lump-sum damages award using the corrected amount of lump-sum damages.

improvements could also be made if plaintiff was not receiving a lump-sum damages award, and there would not be "a significant difference" in the tax consequences between the two situations. Id. at 818-19. Finally, using those taxable incomes and the relevant tax brackets, Dr. Ben-Zion determined each partner's estimated tax liability for 2017. Id. at 614-15, 623.

3. Determining the Tax Neutralization Payment

To determine the tax neutralization payment to which he believes each partner is entitled, Dr. Ben-Zion subtracted the additional tax liability that the partner would have incurred had the government not breached the contract from the tax liability that the partner will incur as a result of being allocated his or her share of the lump-sum damages award. Id. at 617. Dr. Ben-Zion then adjusted that amount to account for the fact that the tax neutralization payment itself is subject to taxation. Id. at 619-60. He did so by taking each partner's taxable income for 2017 and increasing it by an amount that would "produce the same net income after tax that he [or she] would have" received had the government not breached the contract. Id. at 620; accord id. at 624. This increased amount is the partner's tax neutralization payment. See also id. at 561 (reflecting Dr. Ben-Zion's opinion that all of the partners will face an adverse tax consequence from the lump-sum damages award because none of them currently is in the highest marginal tax bracket). And, Dr. Ben-Zion opined, the total of the partners' tax neutralization payments is the total tax neutralization payment to which plaintiff is entitled. Id. at 635-36.

D. Defendant's Response

Defendant contends that plaintiff has not established its entitlement to a tax neutralization payment with reasonable certainty, and advances four overarching arguments in support of its contention.

Initially, defendant argues that Dr. Ben-Zion's methodology for calculating the tax neutralization payment was flawed, identifying four such flaws in particular. First, defendant notes that Dr. Ben-Zion used the same methodology that he uses in wage and employment cases, and contends that this methodology is too simplistic to be used in a case, like this, that involves a partnership with five partners and almost twenty years of future lost profits.

The second methodological flaw identified by defendant is that Dr. Ben-Zion made no effort to incorporate known information regarding the partners' future incomes into his calculation, or to request any such information in the first instance. Specifically, defendant remarks that Dr. Ben-Zion ignored the effects of the ages and life expectancies of Richard Gullotta and his wife, the unlikelihood that Eric Gullotta's income would remain at its very low 2014 levels, and the effect of Karen Kass returning to the workforce and of her husband becoming a CPA.[67]

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[67] There is no evidence in the trial record that Karen Kass is not currently in the workforce or that her husband is attempting to become a CPA. Rather, defense counsel made

The third methodological flaw noted by defendant is that Dr. Ben-Zion's decision to ignore the effects of the partners' passive activity losses was both unsupported by any calculations and not in accordance with the Internal Revenue Code. Regarding the former contention, defendant acknowledges Dr. Ben-Zion's assertion that the partners' carried-forward passive activity losses could be used to offset a lump-sum damages award and future net income in the unrestricted scenario to equal effect, meaning that they would have no discernible effect on his tax neutralization analysis. However, defendant remarks, Dr. Ben-Zion did not provide any calculations in support of his assertion. With respect to its contention that Dr. Ben-Zion's calculations did not comport with the Internal Revenue Code, defendant, relying on the testimony of Mr. Krabbenschmidt, explains that a lump-sum damages award would not simply be added to the partners' adjusted gross incomes, but would first be placed in a "passive-activity basket" and reduced by any existing passive activity losses.

The final methodological flaw urged by defendant, again relying on the testimony of Mr. Krabbenschmidt, is that Dr. Ben-Zion erroneously included wage income when calculating the tax consequences of the lump-sum damages award while at the same time excluding wage income when calculating the tax consequences had plaintiff been permitted to convert Sonoma Village Apartments to a market-rate rental property in 2011. As a result, defendant contends, Dr. Ben-Zion overstates the partners' adverse tax consequences.

Defendant's second overarching argument is that plaintiff's partners have the ability to employ certain tax strategies that would substantially reduce or eliminate any adverse tax consequences of a lump-sum damages award. As explained by Mr. Krabbenschmidt, the partners could amend the partnership agreement to reallocate the income among themselves, Richard Gullotta and his wife could each gift up to $28,000 to each of their children, and plaintiff could make deductible capital improvements to Sonoma Village Apartments.

Third, defendant argues that plaintiff should not be awarded a tax neutralization payment because the partners, and not plaintiff, will incur the tax liabilities, and because any payment made to plaintiff would be distributed to the partners in accordance with the partnership agreement and not in accordance with the amounts calculated by Dr. Ben-Zion. Indeed, defendant avers, if Dr. Ben-Zion's calculations are accepted, all of the partners except Eric Gullotta would receive a larger tax neutralization payment than what Dr. Ben-Zion calculated for them, while Eric Gullotta would receive significantly less than what Dr. Ben-Zion calculated for him.

Finally, defendant argues that the federal and state income tax rates used by Dr. Ben-Zion are speculative. It avers that plaintiff has the burden of proving future federal and state income tax rates through 2035, but rather than offering expert testimony on what the income tax rates

these representations to testifying witnesses based on deposition testimony that was not admitted into evidence.

might be, plaintiff relied on Dr. Ben-Zion's explanation that he assumed unchanging income tax rates because it was impossible to predict future income tax rates.

E. Analysis

In its August 24, 2016 Opinion and Order, the court held that plaintiff was entitled to present evidence on its claim for a tax neutralization payment because such a claim was not barred as a matter of law. Sonoma Apartment Assocs., 127 Fed. Cl. at 732. In so concluding, the court explained:

> The purpose of a tax gross-up payment in a breach-of-contract suit is to "ensure that damages awarded effectively compensate plaintiffs for the harm caused by defendant's action." In short, damages should make the nonbreaching party whole. If plaintiff here can prove, by a preponderance of evidence, that a lump-sum damages award would result in it paying more taxes than it would have paid in the absence of the breach of contract, then it is made whole only if it receives a payment to offset its increased tax burden. Indeed, if plaintiff can make the requisite showing, a tax neutralization payment is particularly appropriate because the breaching party is the federal government. Without the award of a tax gross-up payment, the government would benefit twice from its breach: first–in its proprietary capacity as a contracting party–by requiring plaintiff to continue to provide low- and moderate-income housing when plaintiff was not contractually required to do so, and then–in its role as a tax collector–from collecting more tax payments than it would have collected absent its breach. The government should not be enriched from breaching its contracts.

Id. (citations omitted) (quoting Anchor Sav. Bank, 123 Fed. Cl. at 183); accord id. at 734. After carefully reviewing the evidence in the trial record, the parties' posttrial briefs, and the parties' closing arguments, the court finds that plaintiff would not be made whole without a tax neutralization payment. In other words, and as explained in more detail below, plaintiff has established, by a preponderance of the evidence, both "a reasonable probability" that it will suffer adverse tax consequences due to the government's breach of contract, Locke, 283 F.2d at 524, and the existence of sufficient evidence to allow for the "fair and reasonable approximation" of those adverse tax consequences, Specialty Assembling & Packing Co., 355 F.2d at 572.

Plaintiff's approach to calculating its tax neutralization payment, as presented by Dr. Ben-Zion, is straightforward: (1) estimate the difference between the amount of income taxes that the partners would have paid had the government not breached the contract and the amount of income taxes that the partners will actually pay, based on projections of their nonpartnership income, their partnership income, and federal and state tax income rates; (2) estimate the amount of income taxes that the partners would pay upon receipt of a lump-sum damages award, based on their estimated income in 2017, their shares of the lump-sum damages award, and projected 2017 federal and state tax income rates; (3) compute the difference between the two amounts;

and (4) increase the resulting tax neutralization payment to account for the fact that it, too, will be subject to state and federal income tax. This approach is logical and reasonable. Indeed, defendant does not challenge plaintiff's overall framework for determining the amount of a tax neutralization payment. Rather, defendant contends, for a number of reasons, that this framework cannot be applied to the facts of this case.

One of the reasons that defendant offers for rejecting plaintiff's approach is that "the tax liability does not belong to" plaintiff. Def.'s Posttrial Resp. 62; see also id. (noting that "[t]ax gross-up damages have been allowed in cases where the tax liability belongs to parent entities where those entities are totally or severally liable for the tax"). In other words, defendant challenges plaintiff's standing to pursue a tax neutralization payment on behalf of the partners.[68] "[T]he question of standing is whether the litigant is entitled to have the court decide the merits of the dispute or of particular issues." Warth v. Seldin, 422 U.S. 490, 498 (1975). The standing inquiry involves both Article III "case or controversy" limitations on federal jurisdiction and "prudential limitations on its exercise."[69] Id. As a general rule, a plaintiff "must assert his own legal rights and interests, and cannot rest his claim to relief on the legal rights or interests of third parties." Id. at 499; see also First Annapolis Bancorp, Inc. v. United States, 644 F.3d 1367, 1373 (Fed. Cir. 2011) ("A plaintiff must be in privity with the United States to have standing to sue the sovereign on a contract claim."). However, "there may be circumstances where it is necessary to

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[68] Defendant never uses the word "standing." In fact, the court is uncertain that defendant intended to advance a standing argument when it asserted that plaintiff did not own the tax liabilities at issue in its claim for a tax neutralization payment. The court's uncertainty is premised on several factors. First, defendant does not raise the tax liability ownership issue as a threshold matter, but instead raises the issue as part of its third overarching argument in opposition to plaintiff's claim. Second, defendant only raises the issue as part of its contention that a tax neutralization payment awarded to plaintiff would not "flow through to the partners in proportion to" the adverse tax consequences they would each suffer. Def.'s Posttrial Resp. 62. Third, defendant does not reference any case law regarding standing. Finally, defendant did not raise standing as an issue when seeking the dismissal of plaintiff's claim for a tax neutralization payment in its motion for partial summary judgment. Plaintiff, for its part, merely states: "Here, there is no standing argument, and there is a single plaintiff that has established the tax implications of a lump sum award to its partners." Pl.'s Posttrial Reply 30.

[69] Congress created the Court of Federal Claims under Article I of the United States Constitution. 28 U.S.C. § 171(a). Courts established under Article I are not bound by the "case or controversy" requirement of Article III. Zevalkink v. Brown, 102 F.3d 1236, 1243 (Fed. Cir. 1996). However, the Court of Federal Claims and other Article I courts traditionally have applied the "case or controversy" justiciability doctrines in their cases for prudential reasons. See id.; CW Gov't Travel, Inc. v. United States, 46 Fed. Cl. 554, 558 (2000); see also Anderson v. United States, 344 F.3d 1343, 1350 n.1 (Fed. Cir. 2003) ("The Court of Federal Claims . . . applies the same standing requirements enforced by other federal courts created under Article III.").

grant a third party standing to assert the rights of another." Kowalski v. Tesmer, 543 U.S. 125, 129-30 (2004); accord Singleton v. Wulff, 428 U.S. 106, 114 (1976) ("Like any general rule, however, this one should not be applied where its underlying justifications are absent."). Specifically, litigants may

> bring actions on behalf of third parties, provided three important criteria are satisfied: The litigant must have suffered an "injury in fact," thus giving him or her a "sufficiently concrete interest" in the outcome of the issue in dispute, the litigant must have a close relation to the third party, and there must exist some hindrance to the third party's ability to protect his or her own interests.[70]

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[70] When the United States Supreme Court ("Supreme Court") finds third-party standing, it typically does so when a litigant argues that its injuries result from the violation of a third party's constitutional rights. See, e.g., Sessions v. Morales-Santana, 137 S. Ct. 1678, 1688-89 (2017) (holding that a son who was making a claim for United States citizenship had standing to "seek to vindicate his father's right to the equal protection of the laws"); U.S. Dep't of Labor v. Triplett, 494 U.S. 715, 720 (1990) (holding that a lawyer had standing to argue that "the fee scheme he [was] accused of violating contravene[d the] due process rights" of "the black lung claimants who hired him"); Sec'y of State v. Joseph H. Munson Co., 467 U.S. 947, 954-58 (1984) (allowing a professional fundraising company to argue that a charitable-solicitation statute that limited its commission violated its clients' First Amendment rights). The Federal Circuit has also found third-party standing in this circumstance. See, e.g., Rack Room Shoes v. United States, 718 F.3d 1370, 1372-75 (Fed. Cir. 2013) (holding that importers had standing to pursue the equal protection claims of purchasers). However, the Federal Circuit, another federal appellate court, and at least one federal district court have also applied the Supreme Court's test for third-party standing to situations in which litigants asserted the nonconstitutional claims of third parties. See Willis v. Gov't Accountability Office, 448 F.3d 1341, 1348-49 (Fed. Cir. 2006) (rejecting, in a suit to recover attorney's fees under a fee-shifting statute, an attorney's attempt to assert her client's claim for attorney's fees because the client's ability to claim the fees "would be undermined if [the attorney] could independently pursue an award"); Mid-Hudson Catskill Rural Migrant Ministry, Inc. v. Fine Host Corp., 418 F.3d 168, 172-74 (2d Cir. 2005) (holding that an organization had "standing to bring suit on its own behalf for injuries it sustained as an organization" from the defendant's breach of contract, but lacked "standing to sue on behalf of its volunteers" for the same breach of contract because it did "not demonstrate[] a hindrance to the volunteers' ability to protect their own interests"); One Thousand Friends of Iowa v. Mineta, 250 F. Supp. 2d 1064, 1067-68 (S.D. Iowa 2002) (holding, in a suit challenging improvements to two federal highway interchanges, that a shopping mall, which was organized as a limited partnership, "lack[ed] third-party standing to sue on the basis of alleged injury to its employees' health, safety and comfort" that would result from the improvements because "there [was] no allegation or evidence [the shopping mall had] a personal or legal responsibility to protect the interests of its employees" and because the shopping mall "failed to allege an obstacle to its employees protecting their own health, safety and comfort").

Powers v. Ohio, 499 U.S. 400, 410-11 (1991) (footnote added) (citations omitted) (quoting Singleton, 428 U.S. at 112-16); see also Helferich Patent Licensing, LLC v. N.Y. Times Co., 778 F.3d 1293, 1305 (Fed. Cir. 2015) (remarking that "the very existence" of "traditional non-constitutional third-party standing doctrine . . . presupposes that one person may be adversely affected by (suffer injury in fact from) legal constraints on another and yet not have a legal right to seek elimination of those constraints"). In this case, all three requirements are satisfied: plaintiff has suffered an injury due to the government's breach of contract; the partners have a close relationship to the partnership in that the partners jointly own the partnership; and the partners could not pursue a claim for a tax neutralization payment on their own behalf–even though the adverse tax consequences flow directly from the government's breach its contract with plaintiff–because they are not in privity with the government. Thus, plaintiff has standing to assert a claim for a tax neutralization payment that compensates its partners for the adverse tax consequences they will sustain due to the government's breach of contract.

Relatedly, defendant takes issue with the fact that the total tax neutralization payment calculated by Dr. Ben-Zion will be awarded to plaintiff and distributed in accordance with the partnership agreement, rather than in accordance with the individual amounts that Dr. Ben-Zion calculated for each partner. However, the determination of whether plaintiff is entitled to a tax neutralization payment is based solely on whether defendant's breach of contract caused plaintiff's partners to incur additional tax liabilities, not on how plaintiff ultimately distributes the payment to the partners. Thus, the distribution provisions in the partnership agreement–which can be amended if the partners so choose–are irrelevant to the viability of plaintiff's claim.

Defendant next argues that Dr. Ben-Zion's methodology is, in general, too simple to be applied in this case. To be sure, Dr. Ben-Zion is usually tasked with calculating adverse tax consequences in wage and employment cases that concern a single employee with a simple tax situation, and a short stream of future income. It is also true that plaintiff is composed of five partners, each with unique income and income tax situations, and at least four of whom file complex tax returns.[71] However, the fact that this case presents a more complicated scenario than the scenario typically encountered by Dr. Ben-Zion is no reason to reject Dr. Ben-Zion's methodology. Indeed, requiring Dr. Ben-Zion's methodology to account for every possible event that might affect the partners' future tax liabilities risks making the necessary calculations so complex and unwieldy that the amount of a tax neutralization payment could never be determined, notwithstanding the appropriateness of the remedy. Moreover, requiring the use of a more complex methodology in this case would unduly punish plaintiff, who would not have had to forecast almost two decades of tax liabilities but for the government's breach of contract.

Several other arguments advanced by defendant are variations of its attack on the simplicity of Dr. Ben-Zion's methodology. For example, defendant argues that Dr. Ben-Zion ignored known, or easily discoverable, information in calculating the tax neutralization

[71] Again, the court notes that the trial record contains no information regarding the income or income tax situation of the fifth partner, Mr. Parasol.

payment–namely, the expectations that Eric Gullotta and Karen Kass had regarding their future incomes and the life expectancies of Richard Gullotta and his spouse. With respect to the partners' expectations regarding their future incomes, the court finds that projections of future income based on current expectations are no more certain than projections of future income based on current income. Thus, regardless of whether Dr. Ben-Zion was obligated to investigate the partners' tax situations beyond reviewing their income tax returns, the information he would have gleaned from any such investigation would not have increased the certainty of his projections. On the other hand, Dr. Ben-Zion should have considered the life expectancy of Richard Gullotta when calculating how long Richard Gullotta could continue to earn income, either from his CPA practice or from plaintiff's operation of Sonoma Village Apartments.[72] It was unreasonable for Dr. Ben-Zion to have assumed that Richard Gullotta would continue to receive income, and therefore, pay income taxes, beyond his life expectancy. The only evidence in the trial record concerning Richard Gullotta's life expectancy was presented by Mr. Krabbenschmidt, who indicated that pursuant to the Social Security Administration's mortality tables, Richard Gullotta could expect to live thirteen years beyond the date of trial.[73] Accordingly, plaintiff shall correct Dr. Ben-Zion's calculation to reflect that Richard Gullotta (and, necessarily, Richard Gullotta's spouse[74]) would not receive any income or incur any tax liability beyond 2029.[75]

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[72] There is no evidence in the trial record that Richard Gullotta's spouse is one of plaintiff's partners.

[73] The trial record does not contain any evidence regarding Richard Gullotta's life expectancy at the time the government breached the contract.

[74] The income earned and taxes owed by Richard Gullotta's spouse should be disregarded at the end of Richard Gullotta's life expectancy because (1) only Richard Gullotta, and not his spouse, is a partner of plaintiff, (2) there is no evidence in the trial record that Richard Gullotta's share in plaintiff would pass to his spouse upon his death, and (3) the trial record lacks any evidence regarding the income earned by Richard Gullotta's spouse separate and apart from Richard Gullotta.

[75] There is no evidence in the trial record suggesting that plaintiff's ability to recover damages through the expiration of its contract with the government is affected by the assumption that Richard Gullotta will die before the contract's expiration. Indeed, the partnership agreement provides for the continuation of the partnership upon the death of one of the general partners. See JX 57 at 28 ("In the event of the . . . death . . . of a General Partner, the business of the Partnership shall be continued with Partnership property by the remaining General Partners[.]"), 33-34 ("The Partnership shall be dissolved on the earlier of the expiration of the term of the Partnership or upon . . . [t]he . . . death . . . of a General Partner who is at that time a sole General Partner subject to the right of the Partners to continue the Partnership . . . or . . . [a]ny other event causing the dissolution of the Partnership under the laws of the state . . . ."); see also Cal. Corp. Code § 15908.01 (West 2008) (addressing nonjudicial dissolution of limited partnerships).

Defendant also contends that Dr. Ben-Zion's methodology is too simple because it fails to account for the partners' ability to use their passive activity losses to offset their income from the lump-sum damages award. Dr. Ben-Zion testified that he did not account for this possibility because the partners would be able to use their passive activity losses in both the breach and nonbreach worlds to almost equal effect, thereby eliminating any substantial impact they would have on his tax neutralization payment calculation. Defendant's expert, Mr. Krabbenschmidt, did not refute Dr. Ben-Zion's assertion, and the court has no reason not to accept it, even in the absence of supporting calculations.

Also related to defendant's simplicity argument is defendant's contention that Dr. Ben-Zion failed to account for the possibility that the partners could use tax avoidance strategies to mitigate any adverse tax effects of the lump-sum damages award. All of the strategies that defendant identifies–amending the partnership agreement, taking advantage of the tax codes' gift tax provisions, making deductible capital improvements to Sonoma Village Apartments–are strategies that the partners may or may not choose to use. Indeed, the partners may not want to (or be able to) amend the partnership agreement for reasons unrelated to their income tax liabilities, may have other plans for taking advantage of the gift tax exclusions available to them, and may not want to expend their own funds to make capital improvements. While the partners may ultimately decide to utilize a tax avoidance strategy, defendant has not established that the partners would actually do so upon their receipt of the lump-sum damages award. Cf. Home Sav. of Am., 399 F.3d at 1355-56 (affirming a tax gross-up award over the government's objection that the plaintiff could avoid paying income taxes using "tax planning resources"). Thus, the court declines to assume that the partners would use one or more of these strategies to reduce their tax liabilities.

Having addressed all of defendant's simplicity-related challenges, the court turns to defendant's two remaining objections to plaintiff's claim for a tax neutralization payment. First, defendant contends that Dr. Ben-Zion erroneously included wage income when calculating the tax consequences of the lump-sum damages award while at the same time excluding wage income when calculating the tax consequences of plaintiff being permitted to convert Sonoma Village Apartments to a market-rate rental property in 2011. The court agrees with defendant. When calculating the tax consequences of converting Sonoma Village Apartments to a market-rate rental property in 2011 (the first step of his analysis), Dr. Ben-Zion subtracted the stream of future income taxes that each partner would pay in the status quo scenario from the stream of future income taxes that each partner would pay in the conversion scenario. In both scenarios, the income taxes were based on two sources of income: (1) wage and other non-real-estate income, which would be the same in both scenarios, and (2) the income derived from operating Sonoma Village Apartments, which would be different in each scenario. Because the income taxes on the wage and other non-real-estate income would be the same in both scenarios, the tax consequences of converting Sonoma Village Apartments to a market-rate rental property in 2011 are based solely on the income derived from operating Sonoma Village Apartments. Accord Tr. 1387 (Ben-Zion) ("The tax on the base income falls out."). However, when determining the tax consequences of a lump-sum damages award (the second step of his analysis), Dr. Ben-Zion

included wage and other non-real-estate income in his calculations. By including wage and other non-real-estate income when calculating the tax consequences of the lump-sum damages award when such income does not affect the tax consequences of converting Sonoma Village Apartments to a market-rate rental property in 2011, Dr. Ben-Zion improperly inflated the amount of income taxes that the partners would owe in the year of the lump-sum damages award, resulting in an overstatement of the partners' adverse tax consequences. Accordingly, when recalculating the tax neutralization payment it is owed, plaintiff shall omit wage and other non-real-estate income from Dr. Ben-Zion's computation of the tax consequences of the lump-sum damages award.

Defendant's other remaining argument is that the income tax rates used by Dr. Ben-Zion to project the partners' future income tax liabilities are too speculative. In calculating the tax neutralization payment, Dr. Ben-Zion used the federal and state income tax rates for 2015 to project the partners' tax liabilities for each year from 2016 through 2035 because it was impossible to predict how Congress might change the income tax rates in the future. The court finds Dr. Ben-Zion's use of 2015 income tax rates to project future tax liabilities to be reasonable. As Dr. Ben-Zion recognized, it is impossible to predict what Congress might do in the future–certainly, plaintiff and other similarly situated parties whose contracts with the government specifically provided the option to prepay their loans after twenty years never would have predicted that Congress, even for the noblest of reasons, would enact laws abrogating their previously established contractual rights. Therefore, Dr. Ben-Zion's use of existing income tax rates is no more speculative than the use of any other income tax rates.

As a final matter, the court must address the discount rate that should be used when calculating the tax neutralization payment to which plaintiff is entitled. Dr. Ben-Zion testified that the proper discount rate is the rate that was used to calculate plaintiff's expectancy damages, and defendant did not counter this testimony. Accordingly, the court finds that the tax neutralization payment should be calculated using the postjudgment discount rates that it previously found to be fair and reasonable; in other words, a discount rate of 7% should be applied to projected tax liabilities in the conversion scenario and a discount rate of 10% should be applied to projected tax liabilities in the status quo scenario.

As reflected by the above analysis, and as permitted by binding precedent, the court did not accept plaintiff's tax neutralization analysis in its entirety. See Precision Pine & Timber, Inc., 596 F.3d at 833 ("[A] judge may award damages[] even if he does not fully credit that party's methodology."). Consequently, plaintiff must recalculate its tax neutralization payment to conform with the court's findings and conclusions.

VI. CONCLUSION

When the federal government acts, even when it does so for the public good, its actions can adversely affect the rights of individual citizens. This tension between private rights and the public good is illustrated by what happened in this case: Congress enacted statutes to stem the

loss of available low-income housing to assist low-income households, but in doing so, it required Rural Development to breach existing contracts with the owners of low-income housing, like plaintiff, who tried to exercise their contractual right of prepayment. The government's breach in this case both injured plaintiff financially and damaged Richard Gullotta's trust that the government will honor its contractual obligations. Unfortunately, neither injury is fully compensable by the court: The court cannot award plaintiff the attorneys' fees and costs that it incurred in pursuing its claim against the government.[76] Nor can the court award plaintiff the relief that it truly seeks–an order directing the government to abide by the terms of the contract that it drafted.

What the court can do is–as best as it can–compensate plaintiff for the benefits it expected to receive from operating Sonoma Village Apartments as a market-rate rental property had the government not breached the contract, and ensure that such compensation does not further enrich the government at plaintiff's expense. Thus, the court awards plaintiff expectancy damages and a tax neutralization payment.

As discussed above, the court did not adopt either party's position on damages in its entirety. Accordingly, the court cannot enter judgment until plaintiff's damages are recalculated in accordance with the court's findings and conclusions. To facilitate the prompt entry of judgment, the court adopts the following procedure:[77]

- By **no later than 12:00 p.m. (EST) on Monday, November 6, 2017**, the parties shall file a joint status report proposing the amount of judgment that should be entered in this case, assuming that the judgment will be entered on **Thursday, November 9, 2017**. The parties shall specify how much of the proposed amount is to compensate for plaintiff's expectancy damages and how much of the proposed amount is attributable to the tax neutralization payment. Agreeing to an amount of judgment does not signify agreement with the court's findings and conclusions, waive any arguments or rights the parties might otherwise have, or impact either party's right to an appeal.

- If the parties disagree as to the amount of either component of the proposed judgment, each party shall, in the joint status report, indicate its proposed

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[76] Although not taken into consideration by the court in determining damages, the court observes that in this breach-of-contract case arising from the government's refusal to allow plaintiff to exercise its contractual right to prepay the balance of its loan, plaintiff is not entitled to an award of attorneys' fees, costs, and expenses. Had this case arisen under the Takings Clause of the Fifth Amendment, every element of plaintiff's monetary damages would be compensated.

[77] The court derives this procedure from the one adopted by the court in Franconia Associates, 61 Fed. Cl. at 771.

amounts and explain why its proposed amounts most accurately conform to the court's findings and conclusions. These proposed amounts should be based on the assumption that the judgment will be entered on **Friday, December 1, 2017**. Then, by **no later than Friday, November 17, 2017**, each party shall file a response addressing why the other party's proposed amount does not most accurately conform to the court's findings and conclusions.

- The parties shall not use this process to reargue or seek reconsideration of any of the issues resolved by the court's findings and conclusions.

Finally, due to the existence of a protective order in this case, the court has filed the decision under seal. The parties shall confer to determine any agreed-to proposed redactions. Then, **by no later than Friday, September 29, 2017**, the parties shall file, under seal, a joint status report indicating their agreement with any proposed redactions, **attaching a copy of those pages of the court's decision containing proposed redactions, with all proposed redactions clearly indicated.** In addition, defendant shall file, pursuant to paragraph 11 of the protective order, redacted versions of the documents it previously filed under seal (electronic case filing numbers 74, 85, and 117).

IT IS SO ORDERED.

s/ Margaret M. Sweeney
MARGARET M. SWEENEY
Judge